ASPI
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The Cost of Defence

ASPI Defence Budget Brief 2014–2015

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Eighty million, two hundred & eighty-one thousand, three hundred & ninety-one dollars & seventy-eight cents **per day**

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Note on title:
The figure of $80,281,391.78 represents one three-hundred-and-sixty-fifth of reported Total Defence Funding for financial year 2014–15. This does not include funds appropriated to the Defence Housing Authority, those administered by Defence for military superannuation schemes and housing support services, nor the additional funds provided directly to the Defence Materiel Organisation.

Contents

Executive Director's introduction

This is ASPI's thirteenth annual Defence Budget Brief. Our aim remains to inform discussion and scrutiny of the Defence budget and the policy choices it entails.

As has been the custom in the past, we explore new areas in this year's Brief. The new entrant this year, *Delivering Capability,* brings together material on the planning and delivery of new capability for the Australian Defence Force.

Acknowledgements are due. The not inconsiderable task of preparing the document for publication has been ably taken care of by Janice Johnson. Many others have helped by providing comments, offering advice, and checking facts. Our thanks go out to them all. Special thanks go to Tom Muir who contributed an in-depth examination of the Landing Helicopter Dock project and Karl Claxton who provided important insights to the Foreign Aid chapter. Finally, Kristy Bryden again undertook the Herculean task of proofreading every chapter.

Also, Defence was kind enough to look over a preliminary draft of this Brief and provide valuable comments. This helped clarify some important points and resulted in improved accuracy in many areas. Of course this does not in any way imply that Defence endorses this document or even supports its conclusions.

My colleague Mark Thomson, who is ASPI's Senior Analyst for Defence Economics, has once again pulled together the brief in the short time available. For this I extend my sincere thanks. As always, responsibility for the judgements contained herein lie with Mark and me alone.

Lastly we should acknowledge that we at ASPI are not disinterested observers of the Defence budget. Our funding from government is provided through Defence at the rate of eight thousand, five hundred and forty-two dollars and eighty cents ($8,542.80) per day. Details can be found in our 2012-13 Annual Report.

Peter Jennings
Executive Director

Executive summary

This year's federal budget was dominated by budget repair. Yet amid the spending cuts and tax increases, Defence did very well. Nominal defence spending will grow by $2.3 billion next financial year (2014-15) to $29.3 billion, representing 1.8% of GDP. In real terms, the year-on-year increase amounts to a 6% boost.

The increase would have been larger still but for extra funding provided for the current year (2013-14) by the Gillard ($359 million) and Abbott ($500 million) governments in response to mounting funding pressures.

Defence Budget 2015

Defence funding 2014-15:	$29.3 billion
Share of GDP:	1.8%
Share of Commonwealth spend:	7.1%
Real growth on prior year:	6.1%

Expenditure shares

Investment:	$8.6 billion	(29.3%)
Personnel:	$11.1 billion	(37.8%)
Operating:	$9.6 billion	(32.9%)

Cost of deployments

Afghanistan & Middle East:	$350 million
Border protection:	$60 million

Key budget measures

$192 million for Gap-year reinstatement

$1.5 billion brought forward over 4 years

Critically, this year's budget establishes a credible base from which the government can deliver its promise to spend 2% of GDP on defence by 2023-24.

Key initiatives in this budget included the shifting of $2 billion of funding previously planned for 2017-18, of which $1.5 billion was brought forward to address immediate pressures, and $520 million was deferred until 2019-20 and 2020-21. By doing so, near-term budget pressures have been reduced and the medium-term funding profile has been smoothed.

Funding was also provided to reintroduce the ADF gap-year program ($192 million) and provide more generous indexation arrangements for some legacy military superannuation schemes—each an election pledge made good. At the same time, the existing defined benefit military superannuation scheme is being closed to new entrants and a new accumulation scheme introduced.

Despite a promise of 'no further cuts to Defence spending', an increase to the efficiency dividend on non-operational areas will see $75 million returned to Treasury over four years.

Next year's boost to defence spending was not entirely, or even predominately, the result of funds brought forward by the new government. The previous government had already budgeted for a substantial recovery in defence spending in 2014-15. Setting aside automatic supplementation for foreign exchange movements and operational costs, and allowing for the additional funds provided by the previous government mid-year, this government's first budget only boosted the GDP share in 2014-15 from 1.78% to 1.80% of GDP. In fact, the largest contributions to the result relative to the estimate from May 2013 were slower than expected nominal GDP growth leading to a 0.05% increase in the defence GDP share and foreign exchange supplementation leading to a 0.04% increase.

Nonetheless, the government clearly demonstrated a strong commitment to defence in the 2014 budget; every extra dollar allocated to Defence meant deeper cuts to social programs and higher increases to taxes than would have otherwise been the case to achieve its fiscal goals.

Over the next three years, defence spending is slated to remain largely steady in real terms before jumping up in the fourth year. Because the economy is expected to grow in the intervening period, on current plans the share of GDP will decline to 1.75% in 2017-18.

Defence will face two challenges over the next several years; accommodating rapid growth in capital investment, and rebuilding ADF numbers after three successive years of unplanned decline.

Recent cuts to defence spending fell disproportionately on the capital investment program. So although total spending will only rise in real terms by around 6% next year, investment in new equipment will grow from $3.6 billion this year to $6.1 billion. Experience shows that such rapid growth will be very difficult to achieve. Hopefully, the relatively large number of off-the-shelf purchases in the portfolio will lessen the challenge. But even if money is handed back, it'll have been worth the risk to regain momentum in the investment program.

On the personnel front, the size of the permanent ADF has fallen three years in a row despite attempts otherwise. Several factors are likely at play, including a higher than anticipated separation rate and overly conservative recruiting targets. Given the stubborn persistence of the problem, it may be that Defence's workforce analysis and planning capability needs a revamp.

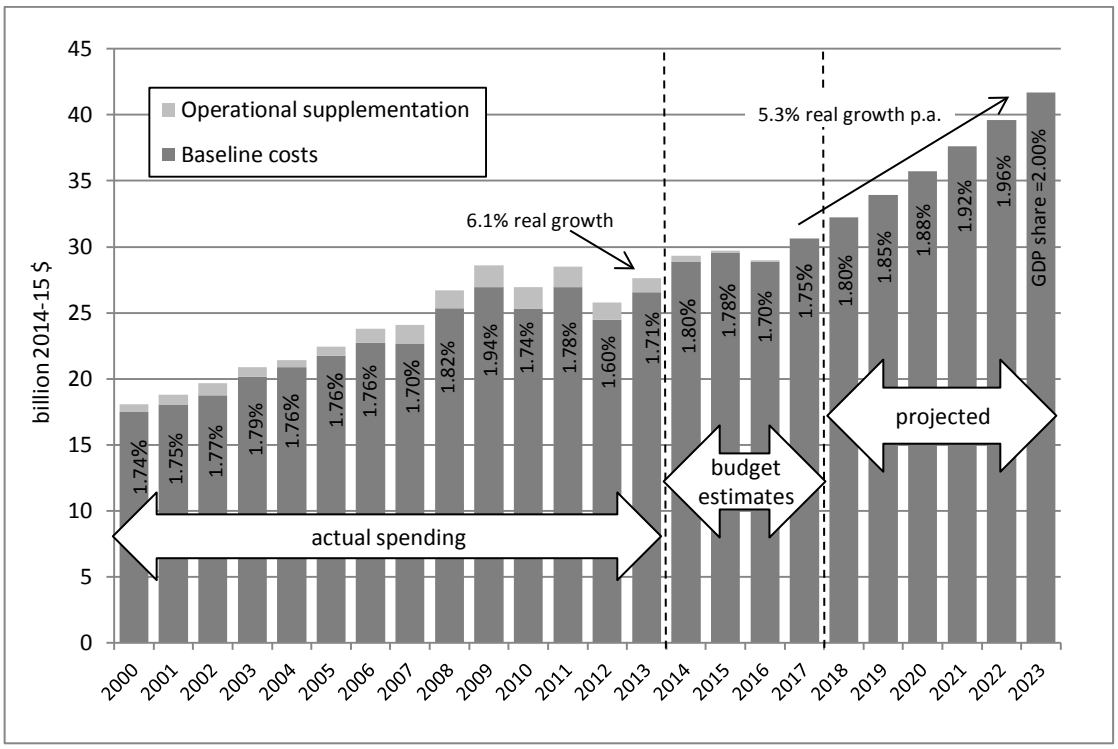
Finally, and as usual, this year's budget announced yet another round of savings and efficiencies. According to the budget night press release; '$1.2 billion in back office savings over the Forward Estimates will be reinvested into Defence capability'. So the good news is that funding will not be lost. However, looking to the Treasury Papers for more detail, it turns out that the savings include a delayed investment in military accommodation ($300 million), reduced Smart Sustainment initiatives ($64 million) and reduced use and support of military trucks ($60 million). In terms of what might be labelled 'back office', civilian numbers will fall by 1,200 and there'll be 300 fewer service provider staff ($606 million), although the latter does not accord with figures given elsewhere for the contractor workforce. Again, as usual, we've been given an incomplete and confusing picture of what's happening with internal savings.

Is 2% of GDP feasible in 2023-24?

The government hasn't disclosed its plans for defence spending beyond four years into the future. Nonetheless, we can make a reasonable estimate for the next six years on the basis of reaching the government's stated goal of spending 2% of GDP by 2023-24. Assuming a steady increase over the six years beginning in 2017-18, we'll need 5.3% real growth each year to make it. While it's theoretically possible to delay spending increases until the final years of the decade, this would almost certainly exceed the capacity of Defence and defence industry to absorb. With only six years to reach 2% of GDP, it's going to be steady growth or not at all.

In terms of raw spending, there's no reason why defence expenditure can't be increased to 2% of GDP a decade hence. After all, six years was long enough to mobilise, fight and conclude WWII. With four years to go, there's plenty of time to plan and prepare. It would be learned helplessness to throw up our hands and declare the goal unachievable. It's of course open to the government to make the job easier by commencing growth towards the

2% target earlier; the sooner growth begins, the less steep it'll need to be. No doubt that's one of the options being considered for the 2015 Defence White Paper.



The critical question is not whether funds can be spent, but whether they'll be made available to be spent. In the medium term, the government's commitment to defence spending will be tested by the siren song of returning to surplus. In the next three to five years the government will want to balance the books. On current estimates, a surplus will be within easy reach as early as 2017-18, or 2016-17 with a bit of effort. It remains to be seen what will happen if the choice is between sustaining defence spending and delivering an early surplus at an opportune point in the electoral cycle.

In the longer term, there's no economic impediment to Australia spending 2% of GDP on defence. But the government's ability to do so will depend on the electorate's willingness to incur the resulting opportunity cost of forgone social services and higher taxes. On current estimates, each of Australia's roughly 10 million workers will be contributing around $5,000 a year each to sustain the promised defence budget in 2023-24. Yet, according to opinion polls, support for higher defence spending has fallen from 60% in 2001 to less than 40% today. Absent a strategic crisis to shake off the complacency, sustained increases to defence spending will only be possible if the government makes a convincing case for doing so.

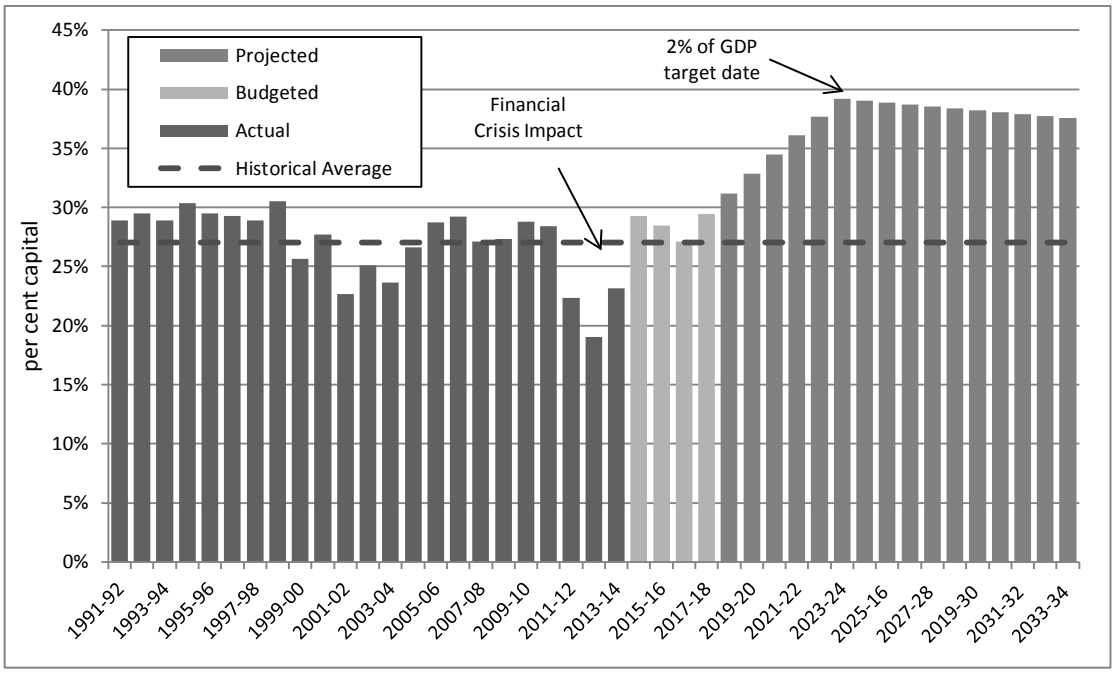
It's not my job to make the government's case. But it's worth pointing out how the promise of spending 2% will play into Australia's credibility down the track. The 2009 Defence White Paper set out an ambitious vision of the ADF and promised 21 years of funding growth to pay for it. Over the subsequent three years, funding was cut in successive waves in an unsuccessful attempt to deliver a fiscal surplus. The 2013 Defence White Paper then did little to redress the gap between means and ends. To anyone who was paying attention, including our allies and friends, we showed that we were all talk and no action.

By promising to spend 2% of GDP on defence in 2023-24, the incoming government has set a benchmark against which our commitment will again be tested. If we once more fail to follow through, it'll be a second strike against our credibility. In an era when the United States is looking for its allies to step up rather than free ride, there's much at stake.

Where is the ADF headed?

On the basis of projected economic growth, 2% of GDP will amount to around $52 billion in 2023-24, equivalent to almost $42 billion in today's terms. It's natural to ask what sort of defence force it'll buy. Assuming current targets for the size for the defence force (just under 60,000 permanent personnel) and historical trends in personnel and operating costs, there'll be around $112 billion available over the next decade for capital equipment. In comparison, we've spent just $66 billion over the decade just past (both figures expressed in today's dollars taking account of inflation).

If nothing else happens, the share of the budget going to capital equipment will rise from an anomalous low of 23% today to around 39% in a decade's time. On this projection we'll be spending $16 billion on capital in 2023-24 as measured in today's dollars. In comparison, the average capital share over the past almost quarter century (since 1991) has been 27%.



This mountain of funds can be spent in two ways. First, by increasing the ratio of equipment to people (what economists call 'capital deepening') and, second, by increasing the number of people in the defence force. For example, if capital investment is constrained to 30% of defence expenditure, there'll be enough money to add an extra 11,000 people to the force.

It's likely that we'll see a combination of both in the years ahead. While it's true that projects such as the future submarines and replacement frigates will be costly ventures, they'll each only represent $1 or $2 billion a year in the investment budget. Ships and submarines are expensive, but they take time to build. The essential point is this; to sustain spending at 2% of GDP over the long run, the size of the defence force will need to grow. Consistent with

this, we've already seen the long-term military personnel target ratcheted up in this budget (curiously without the government making an announcement).

So far, the government has been silent on expanding the force. To the contrary, most of the public discussion has been focused on the poor state of the books left by their predecessors. It's entirely likely, indeed probable, that they haven't fully worked through the consequences of spending 2% of GDP in 2023. They certainly couldn't have foreseen what it meant from opposition when the promise was made.

The risk in all of this is that proposals of diminishing worth—for both extra personnel and new equipment—will arise. In a funding regime driven by GDP share rather than by balancing costs and benefits, there's no lower limit on the marginal worth of proposals. Such is the nature of a policy based on input costs rather than capability outcomes.

The recent proposal to retire the Anzac frigates early to provide work for soon to be dormant shipyards, or the equally profligate proposal to build support ships in-country when they can be purchased more cheaply offshore, exemplify the risk of generous funding leading to wasteful spending. By setting a generous financial target for Defence, the government has effectively sent the military on a shopping expedition.

Is Defence ready for what comes next?

The Abbot government went to the 2013 election with a strong reform agenda for Defence and its acquisition and support agency the Defence Materiel Organisation (DMO). Hopefully, the promised 'first principles' review of Defence will commence soon. When it does, there are a range of issues to be examined, from the status of DMO, to the role of the service chiefs. My instinct is that there is more to be gained from building on the present model than by radically reshaping either Defence or DMO.

In particular, suggestions to drastically reduce the size of DMO need to be treated with caution. With a mountain of capital investment looming on the horizon, there'll be work aplenty for folks in DMO and for those who plan capability in Defence. The surest way to sabotage the path to 2% of GDP would be strip away the people needed to conceive and execute defence projects.

That's not to suggest that further reform is unwarranted. There are real questions about the accumulation of executive and middle management positions in Defence and DMO over the past decade (as there are across every agency in Canberra), and opportunities to better exploit information technology and leverage private sector capacity remain. Then there's the untouchable frontier of the military workforce. There's now more than one officer for every three enlisted personnel in the ADF, yet military positions have been strictly quarantined from recent savings measures. If the government wants value for money from Defence, it needs to look as closely at its military workforce as it does at its civilian.

Conclusion

In the present fiscal environment, the budget was unexpectedly favourable for Defence. More importantly, the government appears serious about increasing defence spending to 2% of GDP within the decade. All that remains is for the 2015 Defence White Paper to tell us why it is necessary, and what it is that we are going to get for our money.

Chapter 1 – Background

Key Points

The repercussions of the Global Financial Crisis continue to be felt in the strategic affairs. In particular, Defence spending in many advanced economies is being constrained by high debt and slow growth.

Given the accelerated shift in economic and strategic weight, the critical question for Australia is whether our defence policy needs to take into account the risk that the United States will play a diminished role in regional security in the future.

1.1 Strategic Context

Absent the passage of time, it can be hard to discern history's turning points. For a while, it seemed as though the attacks of 9/11 had changed everything. Terrorism had become an enduring threat, US foreign policy had become unashamedly neoconservative, and counterinsurgency had become the future of war. But the so-called 'War on Terror' has since faded into memory. Far from being a defining moment for the 21st century, it now seems a distant aberration—albeit a costly one.

The other contender for the century's watershed moment is the 2008 Global Financial Crisis (GFC). While only time will tell how enduring its impact will be, its repercussions continue to be felt. From a strategic perspective, two things stand out.

First, the GFC accelerated the shift of economic weight from advanced to emerging economies, and left many advanced economies with a legacy of crippling debts. In contrast, debt in key emerging economies such as China remained modest. Slower growth and rising debts in advanced economies is exerting downward pressure on defence spending in many countries. From Australia's perspective, the critical outcome is that China's economic capacity is rivalling that of the United States much sooner than would otherwise have been the case—with the military balance in the Western Pacific set to follow suit in the years ahead.

Second, the GFC heralded a more assertive and nationalistic posture by China. Prior to 2008, China appeared to be committed to cooperation and 'peaceful rise', but after the financial crisis the tone and substance of its international relations hardened. While it's difficult to draw a causal link between the GFC and China's behaviour, the timing suggests an attempt to capitalise on perceived US weakness.

These two factors—the accelerated shift in the distribution of power and China's newfound assertiveness—naturally bring into question the future strategic role of the United States in the region. No question is more critical to Australia's security; for the past 60 years plus we've benefited from the strategic stability that the United States has brought to our part of the world.

In 2011, the United States moved to allay regional concerns by announcing its 'pivot' to Asia. Since renamed a 'rebalance' (lest America's non-Asian allies feel neglected), it's a multi-faceted program of US reengagement in the economic, military and diplomatic affairs of the region.

Yet, when all's said and done, the rebalance has made precious little difference to the military balance in the region, and its headline economic initiative—the Trans-Pacific Partnership—will do as little to alter the shifting regional economic balance. To put things in perspective, there's nothing approaching a Marshall Plan or NATO alliance anywhere to be seen.

But the substance of the rebalance may not be as important as its strategic signalling. At the very least the rebalance has helped reassure US allies and friends in the region; questions over US commitment to the region are less acute than they would have otherwise been. Conversely, given recent events, it's hard to argue that the rebalance has resulted in greater caution on China's part—though it must have served as a reminder of the risks they're taking.

On any rational scale, the potential cost of a trans-Pacific conflict would be exceedingly high—even without the risk of nuclear escalation. So although there are no guarantees, the situation is likely to remain stable as long as the resolve of the United States to support its allies appears unwavering. But here we run into murky territory; resolve and perceptions of resolve are as intangible as they are changeable.

Recent events have only added to the uncertainty. Clumsy handling of the Syrian crisis and its rapidly fading red lines has eroded perceptions of American power, as has its impotence in the face of Russian aggression in Ukraine. But take care not to read too much into these events. In Syria it would be a mistake to confuse diplomatic missteps with weakness, and in Ukraine, the United States is being asked to take an exam in a course it never signed up for. Nonetheless, fairly or otherwise, US strength and resolve is being questioned, and not just by outsiders but within the United States itself.

Looking back to the 1970s, and even to the 1990s, it's easy to find episodes where question marks hung over the willingness and capacity of the United States to continue its post-WWII role. Perhaps the present situation will prove to be every bit as transient, I suspect it will. But what about next time, and the time after that when China's military muscle is full blown and the risks to the United States are amplified well beyond where they are today?

The fundamental strategic question for Australia is whether we should plan on the basis of the United States continuing to keep the peace in our part of the world the way it has in the past. Given the long-term horizons inherent to building defence capability, it's a question the authors of the next White Paper have to answer, not for today and tomorrow, but for 10 and 20 years hence.

The 2013 Defence White Paper reassured us that, the *'United States will continue to be the world's strongest military power and the most influential strategic actor in our region for the foreseeable future*.' Its 2009 predecessor took a somewhat more equivocal view. Despite concluding that the *'United States will remain the most powerful and influential strategic actor over the period to 2030 - politically, economically and militarily'* the possibility of the United States playing a diminished role in the region was canvassed.

How should we deal with the risk of the United States becoming a less able or less willing strategic actor in our region? The first option would be reasoned complacency: simply declare the likelihood too small, or too distant in the future to worry about. Effectively, this has been our position to date—and it has worked fine for over six decades. But all good things must come to an end. If and when the time comes to take the risk of US disengagement seriously, we'll be looking for ways to reduce the likelihood and hedge against the consequences of it occurring.

A serious effort to hedge against being left to defend ourselves would be both costly and difficult. Defending our expansive continent and our dispersed broader interests, in a region of growing great powers such as China, would place higher demands on our small economy than presently envisaged. I doubt that 2% of GDP would cut it. Nonetheless, we could probably fashion a conventional force capable of imposing high costs on even the largest of potential adversaries without crippling the economy.

But when the dust settled, and our submarines were tucked away in their hardened pens, and our fighters were lined up on the taxiway wingtip to wingtip, we'd have to ask ourselves whether we'd made the mistake of getting ready to bring a knife to a gunfight. Absent at least a nuclear breakout capability, we would've spent a lot of money to mitigate the Goldilocks set of threats that entail major industrial age attrition warfare but stop short of nuclear exchange.

A less costly alternative would be a hedging strategy built around a 'core force' to allow the ADF to expand quickly in the event of deterioration in our security situation. Although questions of timing would be critical to the efficacy of such a strategy, it would have some intrinsic merit and limited costs. The risk is that it would become an excuse for even more costly overstaffing of senior military ranks and featherbedding of our defence industrial base. And when all was said and done, in terms of the risk of US disengagement, it would ultimately face the same limitations as a serious hedging strategy.

If hedging isn't the solution, we're left with shaping the environment to reduce the likelihood of the United States decamping for Pearl Harbour. In case my bias hasn't yet become obvious, shaping is my preferred option. While I think that a hedging strategy would be both costly and ineffective in all but very special instances, I believe that a determined shaping strategy can materially reduce the likelihood of US departure.

In the first instance, it would simply mean redoubling our efforts in many areas. For example, assisting the United States to engage with the countries of Southeast Asia, and working more closely with other US allies and friends in the region. A further demonstration of our commitment would be to pay greater attention to C4ISR and logistical interoperability with the US military, including by further strengthening our preference for US sourced equipment. And if we were really serious about encouraging the United States to stay around, we'd also have to demonstrate that we're serious about defence—and that would mean spending more than we've done in recent times. Finally, we'd continue our present practice of providing prompt and clear political support to the maintenance of norms in the region, as we did when China announced its East China Sea ADIZ last year.

The obvious counter to the foregoing argument is that the United States will act in its own strategic interests irrespective of how helpful we are. I'm not sure that's true. The United States bases its national identity on providing leadership to like-minded countries. By responding to US leadership and encouraging others to do so, we reinforce the value of leadership from a US perspective. Leaders need followers.

But there's also something that Australia can offer the United States which goes to the heart of its economic and security interests—access to 7.7 million km^2 of terrain stretching from the Pacific to Indian Ocean and from the Great Southern Ocean to the base of the Asian archipelago.

As the Western Pacific becomes more contested, the value of access to Australian ports, airfields and training grounds will surely grow. It's arguably the most valuable thing we can offer our ally, and it's certainly unique in its scale and location. If the emerging strategic concern of the 21st century is that the United States will find its position in Asia untenable, we could do worse than offer them a solid strategic base straddling the sea lanes passing from the Indian to Pacific Oceans.

It remains to be seen how much the next defence white paper grapples with the issues outlined above. On past experience, we shouldn't expect a frank and fearless discussion about our strategic prospects. There's little to be gained by expressing alarm at China's behaviour or admitting doubts about US resolve. Instead we'll get carefully drafted passages that are Delphic and anodyne in equal measure. The real test will be what the government decides about the size and shape of the ADF.

If the fundamental underpinnings of our security really are changing, we should expect a departure from the 'balanced force' approach of collegiately sharing the pie between the three services.

1.2 Political Context

Key Points

Only 1% of Australians think defence/security is the most important problem facing Australia.

Confidence in Australia's defences has trended downwards over the past decade.

Only 38% of Australians support higher defence spending, down from 60% in 2001.

As a political issue, defence is competing for attention with economic issues as the newly elected Abbott government gets on with what it calls 'budget repair'. At the same time, the new government has promised to rectify the systemic underfunding of current defence plans, including through its election promise to boost defence spending to 2% of GDP by 2023-24.

The tension between balancing the budget and properly funding existing plans for defence will play out over the next several years. Absent the emergence of an unforseen issue, political debate is likely to centre on the question of defence spending and the opportunity cost it imposes from a fiscal and political perspective.

Moreover, it's likely that most of the debate will occur within the government itself and across the broader media rather than between the government and the opposition. Although defence isn't a high priority in people's minds—as explained below—the opposition has shown no readiness to argue against higher defence spending. Indeed, in April when the government announced approval of the next tranche of F-35 JSF aircraft at a cost of $12.3 billion dollars (on the same day the Treasurer made his pre-budget austerity pitch) it was left to the media to respond. And respond they did, with a torrent of critical commentary on what was a veritable field day for cartoonists.

The unlikelihood of a broader debate on defence issues reflects the substantial bipartisan agreement on most aspects of defence policy. The underlying concepts laid out in the Fraser government's 1976 Defence White Paper have been echoed in every subsequent document. Where changes have occurred, they've been evolutionary adaptations to our changing circumstances. And while some changes have given rise to political debate at the time—such as the priority to be accorded to 'expeditionary' operations—bipartisan support has eventually been found. More generally, successive governments have been largely happy to take the advice tendered to them from the ADF leadership tempered only by the fiscal constraints of the day.

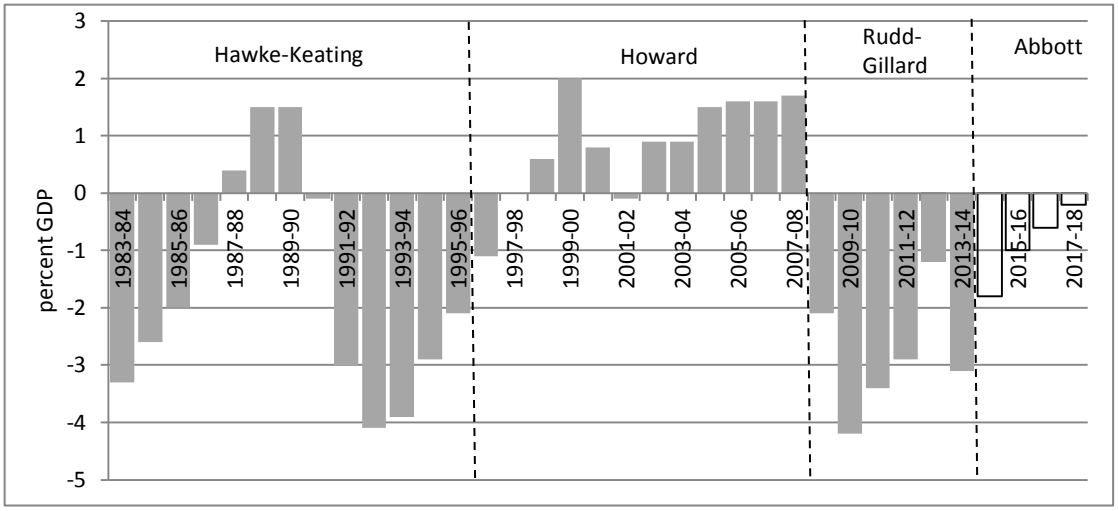
Politics and money

From 2009 until 2012, the previous government's commitment to defence funding was all but totally eclipsed by the political imperative to deliver a fiscal surplus—a goal embraced equally by the then opposition. Why the rush to get out the red? 2012-13 was the last opportunity for the Gillard government to demonstrate (not just promise) a surplus before the 2013 federal election. And how important was that? As Figure 1.2.1 shows with alarming clarity, it was very important; the last federal Labor treasurer to deliver a surplus was Paul Keating in 1989-90. Given the context, a surplus in 2012-13 was the political equivalent of a holy grail worth seeking at just about any cost.

So far, the Abbott government has adroitly avoided putting a hard date on when it plans to return the budget to surplus—though projections in the budget papers point towards

2018-19. But make no mistake; a rapid return to surplus is firmly in its sights. The imperative goes beyond economics; the sooner the Coalition can bring the Commonwealth's finances into surplus, the sooner they'll be able lay claim to being better economic managers.

Figure 1.2.1: Underlying cash balance 1984 to 2017

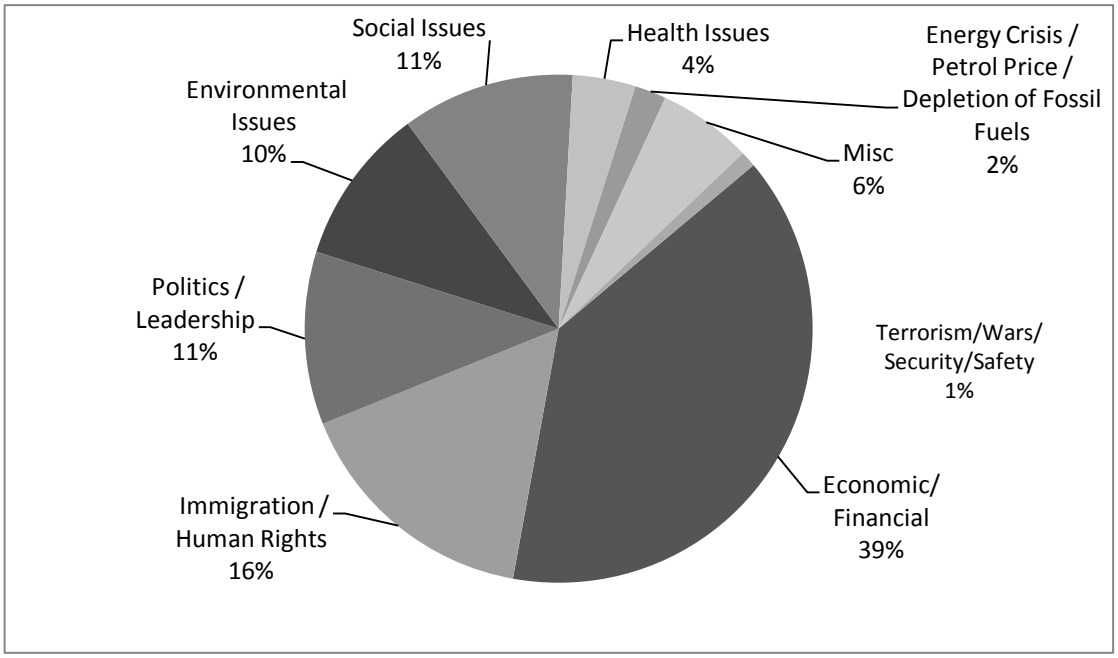


Source: Treasury Papers

Public opinion

At the moment, Australians place a relatively low priority on security. Figure 1.2.2 shows the percentage of respondents who identified particular issues as the most important problem facing either the world or Australia in February 2014.

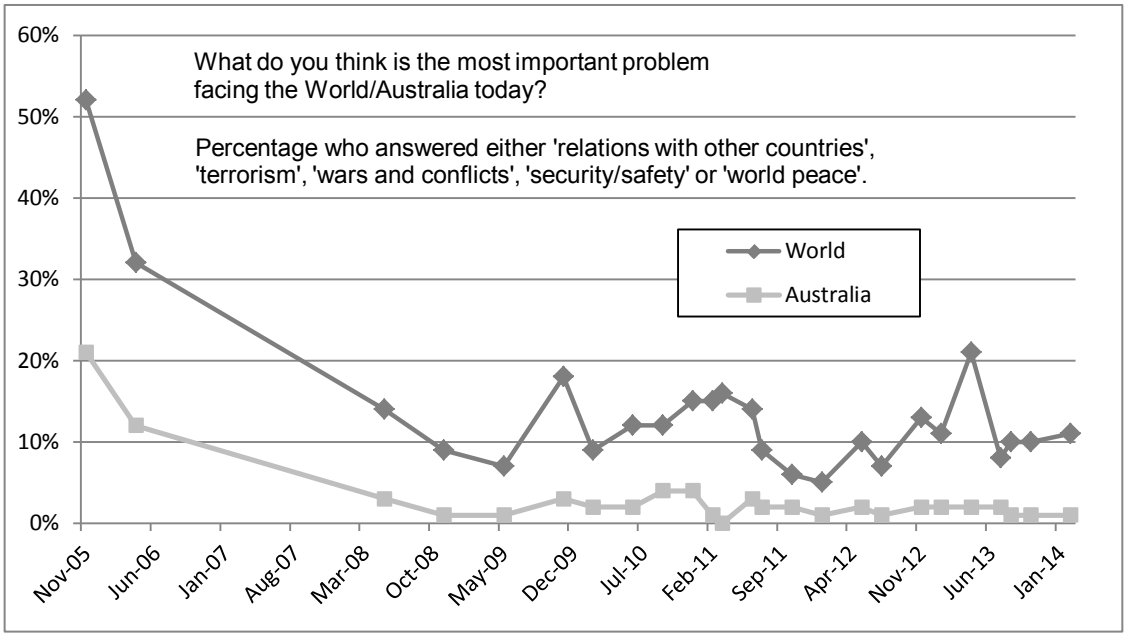
Figure 1.2.2: What do people worry about?



Source: Ray Morgan Research, Finding No. 5432, February 2014.

The relatively low priority currently given to defence is consistent with the deterioration in public perception of the seriousness of defence-related matters over the period November 2005 to February 2013, see Figure 1.2.3.

Figure 1.2.3: Less important than it used to be

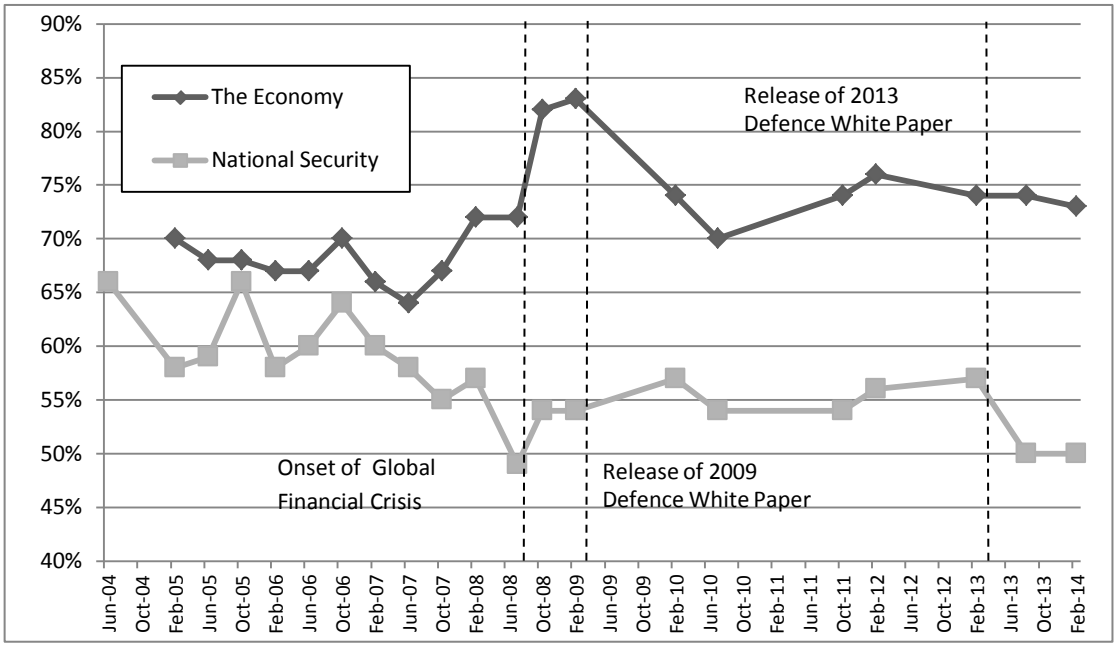


Source: Ray Morgan Research, Finding No. 5432, February 2014.

The seemingly dramatic change in public sentiment in Figure 1.2.3 is at least partially an artifact of respondants being asked to identify a single 'most important' issue. It's entirely possible for defence to still be important in its own right, even if it's not the most important issue of the day. With this in mind, we turn now to examine a more graduated measure of the perceived priority of defence-related issues over time.

Figure 1.2.4 plots the percentage of Australians polled who rated 'national security' and/or 'the economy' as very important in the context of the question: *Would you say each of the following issues is very important, fairly important or not important on how you personally will vote in the federal election?*

Figure 1.2.4: Guns versus butter



Source: Newspoll for The Australian newspaper, June 2004 to February 2014.

As expected, the falling priority for national security is less dramatic in a survey where respondents can choose more than one item from a list of possiblilities. Nonetheless, it's still clear from the data that the GFC heralded a higher priority for the economy, partially at the expense of national security. It's interesting to note that after a pronounced swing in favour of the economy around the time of the GFC, sentiment subsequently plateaued at new levels more favourable to economic issues and less favourable to national security.

And it's not simply that other problems (such as the fragility of the economy) have taken greater prominence in people's assessment. Australians actually feel much more confident that our defence arrangements are effective (see Table 1.2.1). Although there was a small drop between 2010 and 2013 in the number of people who agreed that 'Australia would be able to defend itself successfully if it were ever attacked', the longer term trend since 2004 has been toward greater confidence, as shown in Figure 1.2.5.

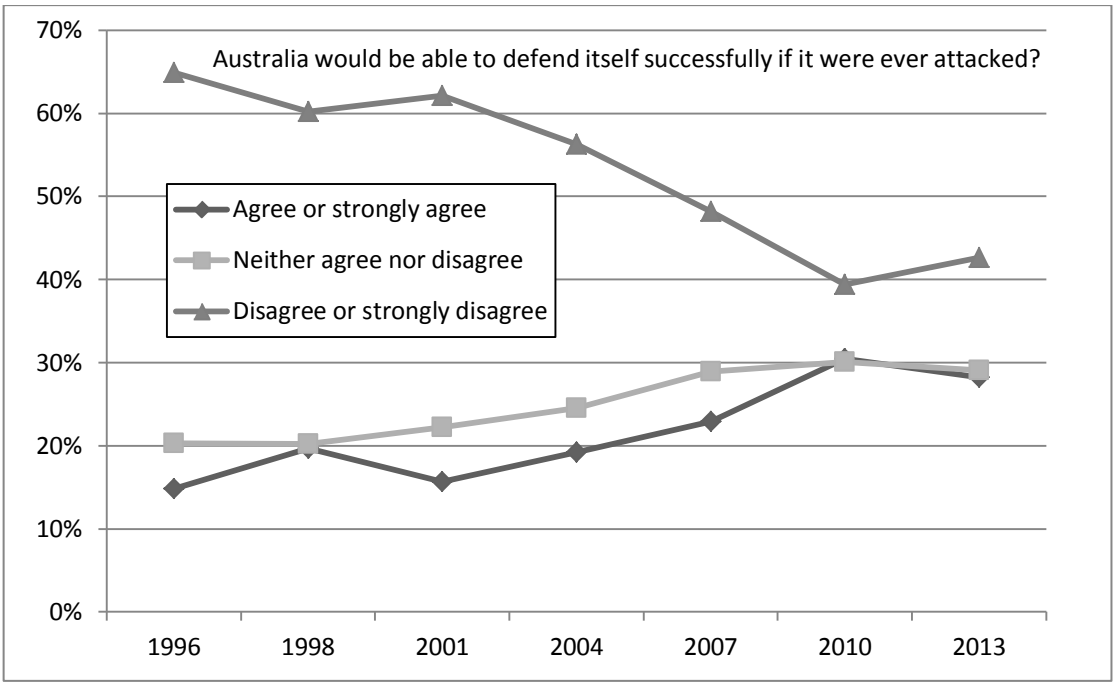
Table 1.2.1: Confidence in Australia's defences

Would Australia would be able to defend itself successfully if it were ever attacked? ***(%)***

	1996	1998	2001	2004	2007	2010	2013
Agree or strongly agree	14.8	19.7	15.7	19.2	22.9	30.5	28.2
Neither agree nor disagree	20.3	20.2	22.2	24.5	28.9	30.1	29.1
Disagree or strongly disagree	64.9	60.2	62.1	56.3	48.2	39.4	42.6

Source: McAllister et al: Trends in Australian political opinion: results from the Australian election study, 1987-2013.

Figure 1.2.5: Confidence in Australia's defences



Source: McAllister et al: Trends in Australian political opinion: results from the Australian election study, 1987-2013.

Paradoxically, at the same time as confidence in Australia's ability to defend itself has grown, perceptions of the strength of our defences have fallen—especially between 2010 and 2013. See Table 1.2.2 and Figure 1.2.6.

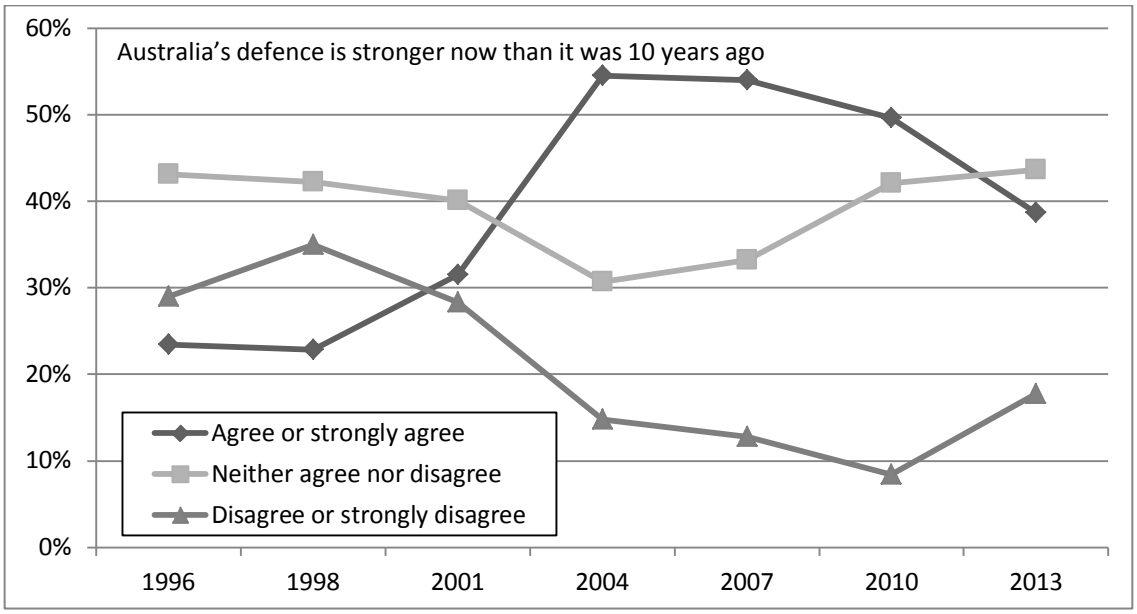
Table 1.2.2: Getting stronger or weaker?

Australia's defence is stronger now than it was 10 years ago (%)

	1996	1998	2001	2004	2007	2010	2013
Agree or strongly agree	27.9	22.8	31.5	54.5	54.0	49.6	38.7
Neither agree nor disagree	43.1	42.2	40.1	30.7	33.2	42.1	43.6
Disagree or strongly disagree	29.0	35.0	28.3	14.8	12.8	8.4	17.7

Source: McAllister et al: Trends in Australian political opinion: results from the Australian election study, 1987-2013.

Figure 1.2.6: Getting stronger or weaker?



Source: McAllister et al: Trends in Australian political opinion: results from the Australian election study, 1987-2013.

These seemingly contradictory trends might be taken to imply that respondents perceive the world to be a safer place. Logically, at least, in a safer world a weaker defence force could nonetheless be more able to defend us than was previously the case. And although it's dangerous to make such an indirect inference from survey responses, perceptions of country-specific security threats also fell between 2010 and 2013 for the key countries of Indonesia and China (see Table 1.2.3 and Figure 1.2.7).

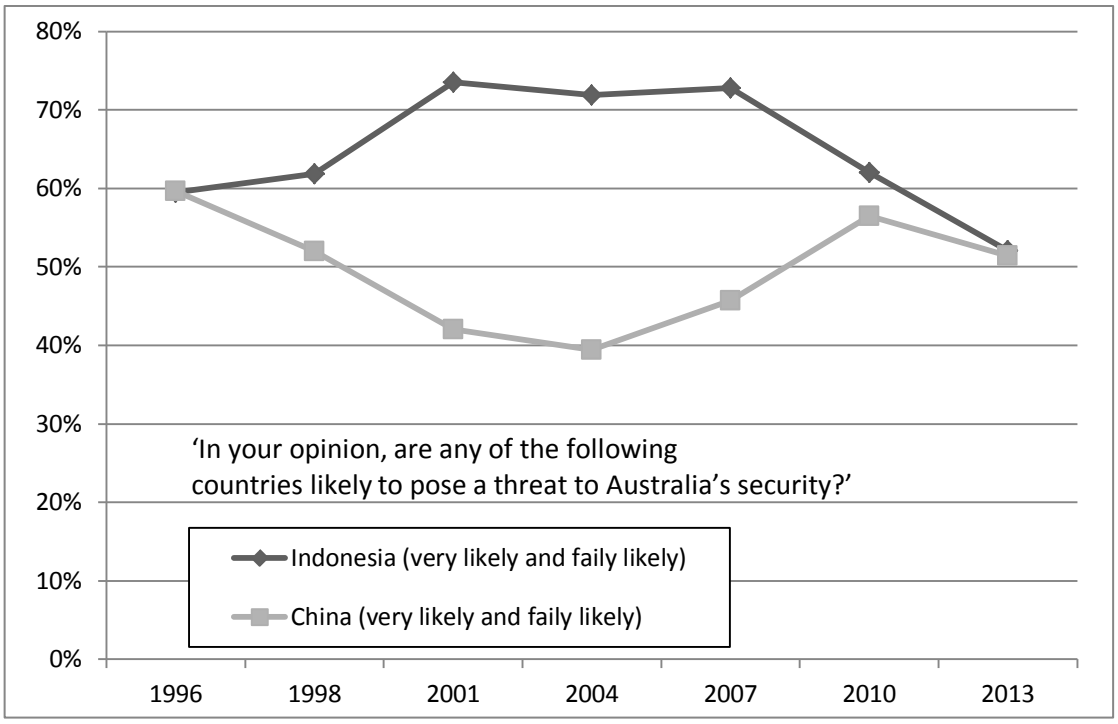
Table 1.2.3: Threat perceptions (%)

In your opinion, are any of the following countries likely to pose a threat to Australia's security?

Indonesia	**1996**	**1998**	**2001**	**2004**	**2007**	**2010**	**2013**
Very likely	23.6	23.1	31.3	28.8	28.1	22.6	16.1
Fairly likely	35.9	38.8	42.2	43.1	44.7	39.4	36.0
Not very likely	40.5	38.1	26.6	28.1	27.2	38.0	47.9
China	**1996**	**1998**	**2001**	**2004**	**2007**	**2010**	**2013**
Very likely	18.6	14.3	9.0	7.7	10.4	14.7	13.7
Fairly likely	41.1	37.7	33.0	31.7	35.3	41.8	37.7
Not very likely	40.4	47.9	57.9	60.6	54.3	43.5	48.7

Source: McAllister et al: Trends in Australian political opinion: results from the Australian election study, 1987-2013.

Figure 1.2.7: Threat perceptions



Source: McAllister et al: Trends in Australian political opinion: results from the Australian election study, 1987-2013.

As might be expected, the combination of falling fears and growing confidence translates into reduced support for increasing the amount of money going to defence (see Table 1.2.4 and Figure 1.2.8). Note that the source for 2013 varies from that for previous years. As can be seen, the proportion of Australians willing to spend more on defence has fallen from a high of 60% in 2001 down to 38% in 2013.

Table 1.2.4: How much is enough?

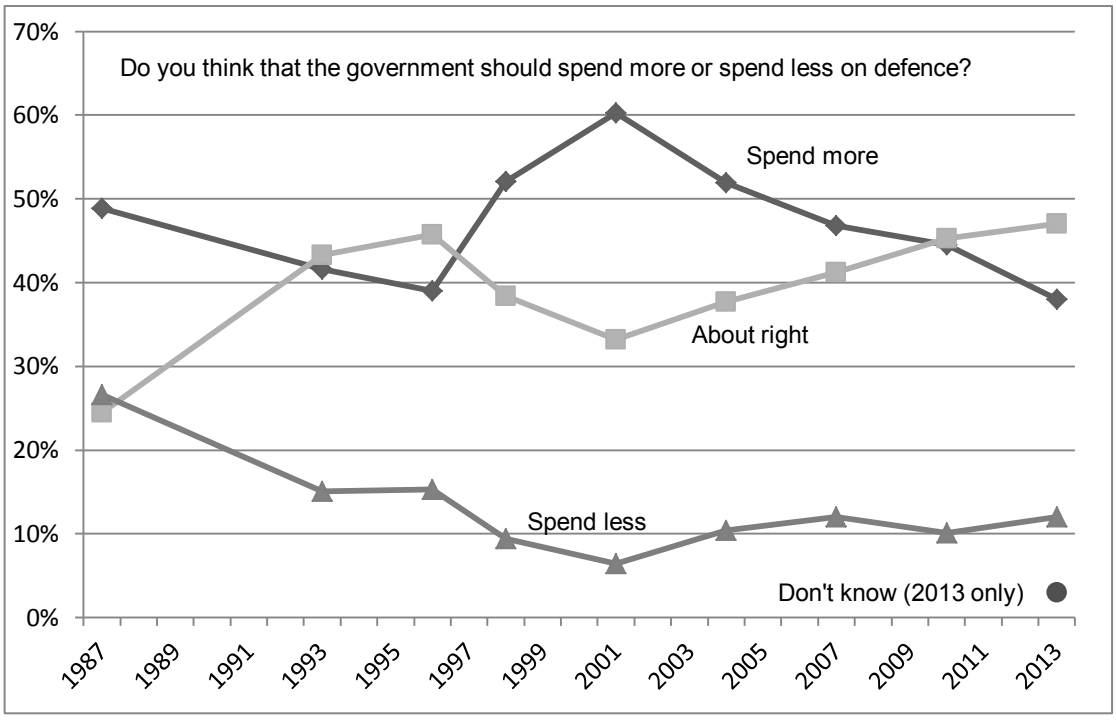
Do you think that the government should spend more or spend less on defence?' (%)

	1987	1993	1996	1998	2001	2004	2007	2010	2013
Spend much more on defence		14.1	10.2	18.5	20.6	15.5	14.9	15.1	38
Spend some more on defence	48.9	27.5	28.8	33.6	39.7	36.4	31.9	29.4	
About right at present*	24.5	43.3	45.7	38.4	33.2	37.7	41.2	45.3	47
Spend less on defence	26.6	11.3	11.2	7.5	4.7	8	8.4	7.7	12
Spend a lot less on defence		3.8	4.1	1.9	1.7	2.4	3.6	2.4	
Don't know									3

* 'Doesn't matter' 1987.

Sources: McAllister et al: Trends in Australian political opinion: results from the Australian election study, 1987-2010. 2013 figures from Lowy Institute Poll 2013.

Figure 1.2.8: How much is enough?



Sources: McAllister et al: Trends in Australian political opinion: results from the Australian election study, 1987-2010. Lowy Institute Poll 2013.

Consistent with the long-term trend in public sentiment, the substantial cuts to the defence budget in 2012 were approved by a greater share of respondents (48%) than those who disapproved (43%), according to the Essential Report poll of 14 May, 2012. More generally, recent polling shows that voters favour spending cuts to higher taxes, see Table 1.2.5. Figure 1.2.9 shows the responses of those who favoured spending cuts in August 2013 and March 2014 when asked which areas of spending should be cut.

Roughly speaking, defence comes out in the middle of the pack, with 34% of respondents in 2013 and 38% in 2014 supporting reduced spending. Both of these results are substantially higher than the 10-12% who supported defence cuts in the polls represented in Figure 1.2.8. Perhaps the critical difference is that higher results arose in the context of choosing between tax hikes and spending cuts, and then only counted respondents who supported cuts.

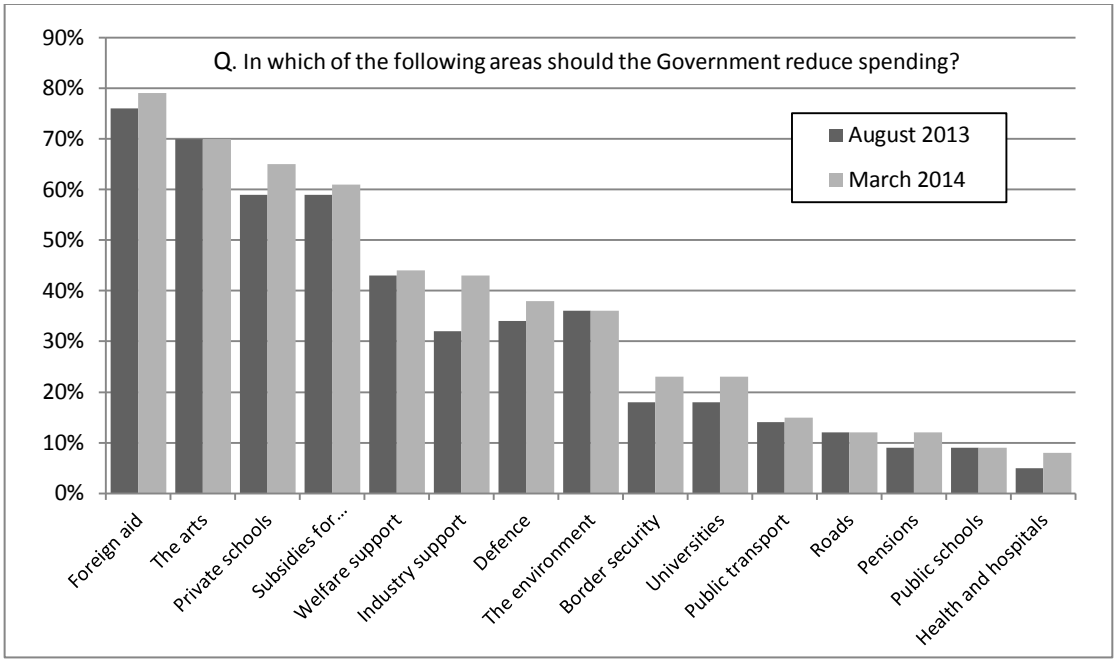
Table 1.2.5: Raise taxes or cut spending?

Do you think the Government should raise taxes or cut spending to reduce the national debt or should they do neither? (%)

	May 2013	August 2013	March 2014
Raise taxes	13	6	6
Reduce spending	55	45	47
Both	n/a	21	19
Neither	20	18	20
Don't know	12	10	8

Source: Essential Media Report May 2013, August 2013 and March 2014

Figure 1.2.9: Where to swing the axe

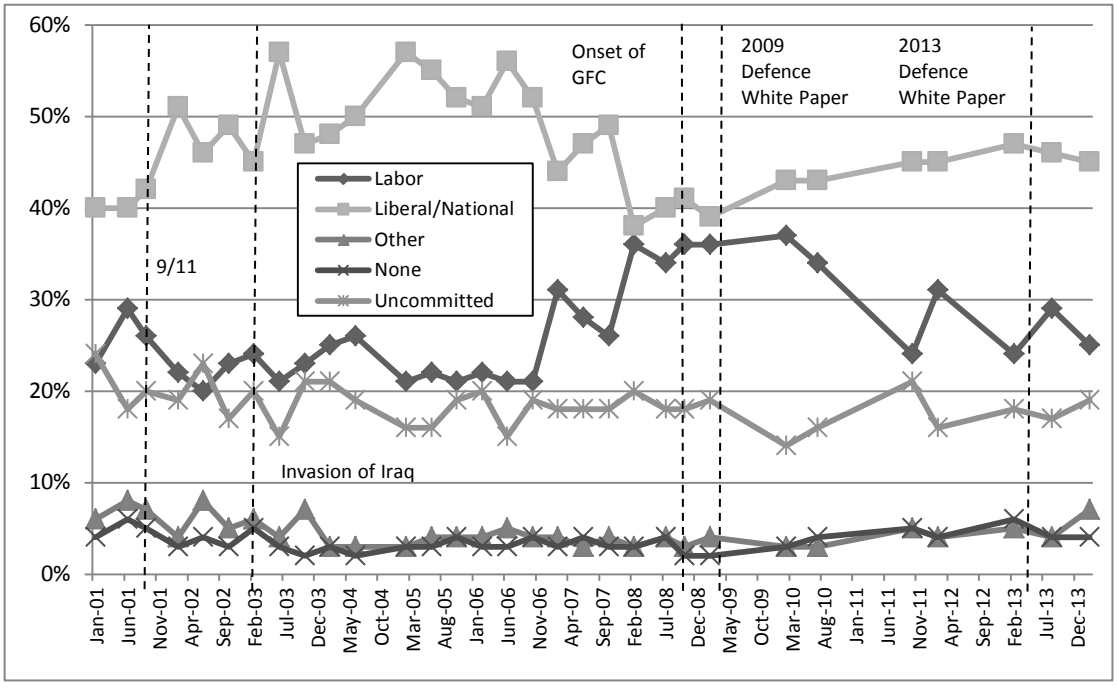


Source: Essential Media Report August 2013 and March 2014
**Industry support was 'Support for manufacturing industry', Subsidies refers to 'Subsidies for business'.*

Who is trusted to handle defence?

Figure 1.2.10 shows polling results over the past 13 years on who is best able to handle defence/national security. Although confidence in the relative merits of Labor and the Coalition converged around the time of the 2007 federal election, the results diverged in favour of the Coalition following the 2009 Defence White Paper. The Coalition has maintained a strong lead since at least late 2009.

Figure 1.2.10: Who is best able to handle defence/national security?



Source: Newspoll for The Australian newspaper, January 2001 to February 2014.
(Defence pre-June 2004, National Security post-June 2004)

Interesting polling following the April 2014 announcement of the purchase of 58 F-35 Joint Strike Fighters revealed systematic differences between how supporters of different political complexions view defence (see Table 1.2.6). The results speak for themselves, while fewer than 13% of Greens voters and 20% of Labor voters supported the purchase, 49% of Liberal-National coalition voters did.

Table 1.2.6: Polling results on F-35 JSF purchase

Q. Do you approve or disapprove of the Government's decision to purchase 58 fighter jets from the US at a cost of $12 billion?

	Total	Vote Labor	Vote Lib/Nat	Vote Greens	Vote other
Strongly approve	7%	3%	13%	<1%	5%
Approve	23%	17%	36%	12%	15%
Disapprove	27%	30%	23%	28%	29%
Strongly disapprove	25%	35%	10%	45%	30%
Don't know	18%	15%	18%	15%	21%

Source: Essential Media Report, 30 April 2014

A new government

The September 2013 federal election saw the Abbott government elected with a comfortable majority in the lower house; 90 seats to the Coalition and 55 seats to Labor. As Table 1.2.7 shows, the electoral system rewards larger parties at the expense of the smaller when it comes to proportioning seats. Of particular note is the large swing to 'other' candidates— fully three times larger than the swing to the Coalition. So while Labor and the Greens fared badly in the December poll, only around a quarter of their lost primary votes went to the Coalition.

Table 1.2.7: Lower house primary votes and seats, 2013 federal election

	Votes	**%**	**Swing**	**Seats**	**%**
Liberal/National Coalition	5,882,818	45.55	+1.93	90	60.00
Australian Labor Party	4,311,365	33.38	-4.61	55	36.67
The Greens	1,116,918	8.65	-3.11	1	0.67
Other	1,603,826	12.42	+5.79	4	2.67

Source: Australian Electoral Commission

A similar trend can be observed in the results for the Senate in the 2013 election (see Table 1.2.8). The Greens and Labor lost 9.5% of the primary vote, the Liberal/National coalition lost almost 1% and 'other' candidates enjoyed a collective swing of more than 10%. The April 2014 West Australian Senate recount saw the major parties punished again, with swings in the primary vote of 5% against Labor and 7% against the Liberal/National coalition. Perhaps surprisingly, the Greens enjoyed half of the 12% collective swing away from the two main parties.

Table 1.2.8: Upper house primary votes and seats, 2013/2014 federal election

	Votes	%	Swing	Seats	%
Liberal/National Coalition	5,057,218	37.71	-0.92	17	42.5
Australian Labor Party	4,038,591	30.11	-5.02	12	30
The Greens	1,159,588	8.65	-4.46	4	10
Palmer United Party	658976	4.91	4.91	3	7.5
Other	2,498,646	15.66	6.28	4	10

Source: Australian Electoral Commission

Note: votes are taken from September 2013 election, seat numbers and percentages include April 2014 Senate re-election

The final result of the September 2013 election and the April 2014 re-election for the Senate in WA is that the Liberal/National coalition has a commanding majority in the House of Representatives but will have to rely on the crossbenchers to pass legislation in the Senate. But this is unlikely to affect the Abbott government's ability to pursue its defence agenda since most defence policy initiatives rely on executive power rather than legislation.

Notwithstanding its strong parliamentary position, the new government's willingness to pursue unpopular policies is likely to be tempered by the electorate's demonstrated volatility and dissatisfaction with the major parties. If so, the government may find it politically difficult to deliver a surplus and boost defence spending as promised.

The government's election platform

Although Defence wasn't a central issue in the 2013 federal election, the government came to power with an official platform covering a range of matters. Key points from its election policy document *The Coalition's Policy for Stronger Defence* appear in Table 1.2.9 along with an assessment of progress to date.

Despite a promise of 'no further cuts to defence spending', the government imposed an increase to the efficiency dividend on non-operational areas of Defence which will see $75 million returned to Treasury over four years. In fairness, the Public Service wide efficiency dividend was disclosed in the Coalition's election platform in what amounts to a case of incompatible promises. However, at election time, the anticipated savings from across the Public Service amounted to $428 million whereas a total of $544 million was harvested this budget—more than enough to quarantine Defence and still deliver greater than expected savings.

Table 1.2.9: Coalition defence election platform

Policy	Status
Continuation of the fundamental defence policy objectives as set out in the 2000 Defence White Paper—i.e. Defence of Australia with concentric circles (p.3).	
'There will be no further cuts to Defence spending under a Coalition government.' (p.4)	$76 million in efficiency dividends were taken from Defence in the 2014-15 Budget.
Savings will be sought from Defence but 'any savings that the Coalition finds from rationalising the Defence bureaucracy will be reinvested in greater military capacity and front line capabilities'. (p.4)	See above.
'….decisions necessary to ensure that Australia has no submarine capability gap within 18 months of the election. (p.4)	
'….replacement of the current submarine fleet will centre around the South Australian shipyards. (p.4)	
Contingent of advice from Defence chiefs, 'we will proceed with the initial purchase of up to 72 JSFs.' (p.5)	Approval announced 23 April 13.
'The Coalition's Defence White Paper will closely consider the need for unmanned aerial surveillance vehicles'. (p.5)	Commitment to purchase Triton UAV made on 13 March 2013.
'We will look for areas where it would be in the mutual interest of Australia and the United States to deepen our longstanding alliance relationship building on the recent announcement to rotate a marine brigade through Darwin'. (p.6)	
'….publish an objective replacement Defence White Paper with costed, affordable ways to meet Australia's defence and national security objectives.' (p.6)	
'The Coalition will appoint a high-profile team to undertake a first-principles review of the structure of the Defence Department and all its major processes.' (p.6)	
'We will work with the Australian defence industry to avoid production troughs by co-operating closely with companies…' (p.7)	
'We will reform the Defence Materiel Organisation (DMO) to ensure it employs commercially experienced procurers with an understanding of commercial principles and risk.' (p.7)	
'…consider further options for reforming the DMO, including proposals for establishing it as a more independent agency driven by cost-benefit assessments'. (p.7)	
Recipients of the Defence Forces Retirement Benefits (DFRB) and the Defence Force Retirement and Death Benefits (DFRDB) military superannuation pensions will see their payments indexed in the same way as aged and service pensions.' (p.7)	Funding provided in 2014 Budget.
'….all ADF dependants will be eligible to claim for out of pocket expenses for GP services. Additionally, each ADF dependant will be able to claim up to $400 per year for allied health services such as physiotherapy, psychology, dentistry and podiatry. (p.8)	Funding provided in 2014 Budget.
'The Coalition will re-build ADF Gap Year programme, progressively increasingly numbers until an average of 1,000 places per annum is made available in the programme.' (p.9)	Funding provided in 2014 Budget.
'Within a decade, Defence spending will be two per cent of GDP'. (p.10)	

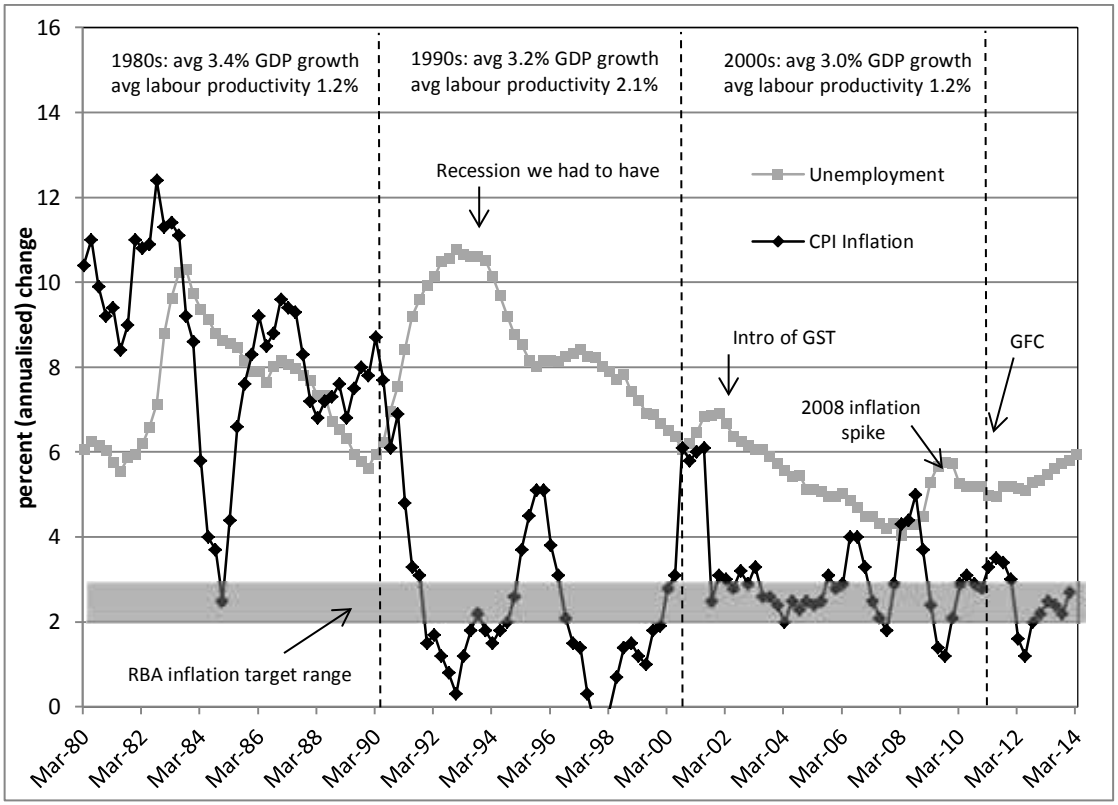
Source: The Coalition's Policy for Stronger Defence, 2013.

1.3 Economic Context

From the early 1990s until late 2008, Australia enjoyed relatively favourable economic conditions, see Figure 1.3.1. Three things stood out:

- In the 1990s, inflation fell to effectively half of what it was in the 1970s and 1980s, notwithstanding a short-lived spike in 2008.
- Economic growth was healthy, averaging 3.4% during the 1990s and 3.2% from 2000 to 2007, despite a fall in labour productivity growth.
- Unemployment fell from a peak of 10.8% in late 1992 to a 34-year low of 4% in early 2008 (at the same time as workforce participation edged up from 62.7% to 65.2%).

Figure 1.3.1: Australian economic performance 1980 to 2014

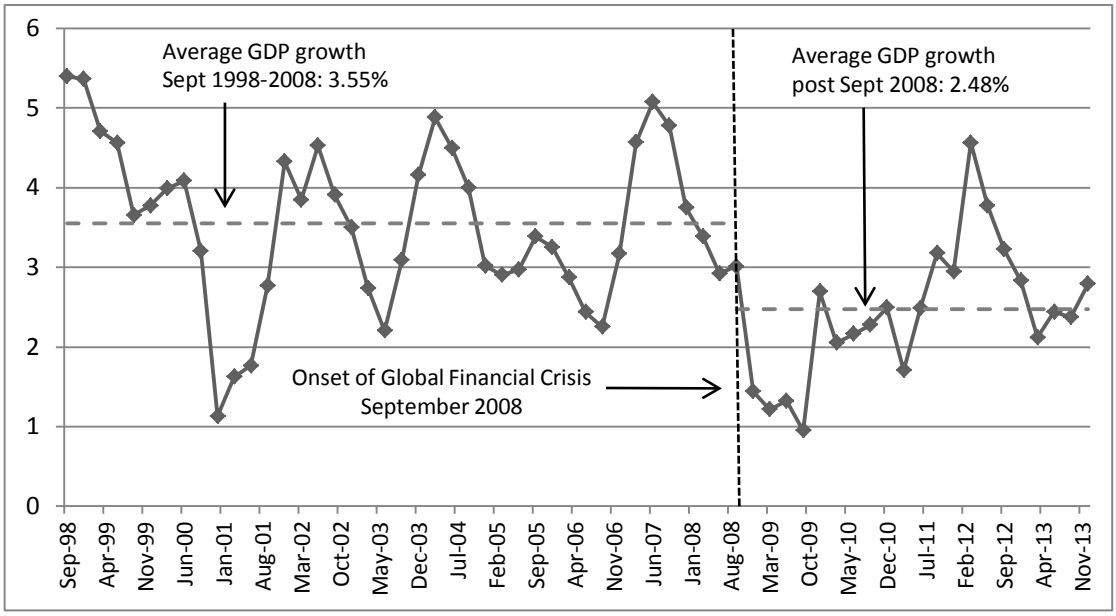


Source: Reserve Bank of Australia (RBA), Australian Bureau of Statistics (ABS) and Treasury statistics.

Strong economic growth allowed the Howard government to simultaneously increase spending and cut taxes in its later years. It was a happy time all around. Few areas were happier than Defence, which saw its funding grow more or less in tandem with GDP from 1999 onwards. But from around 2004, when unemployment fell below 5%, capacity constraints started to be felt in the economy and in 2008 inflation began to rise quickly.

Then, in late 2008, the GFC hit and it looked as though a substantial recession was on the cards. But Australia weathered the economic storm better than expected and only experienced a limited slowdown. Nonetheless, a return to trend growth is yet to emerge. Indeed, economic growth for the decade prior to the GFC averaged 3.55% compared with 2.48% subsequently (see Figure 1.3.2).

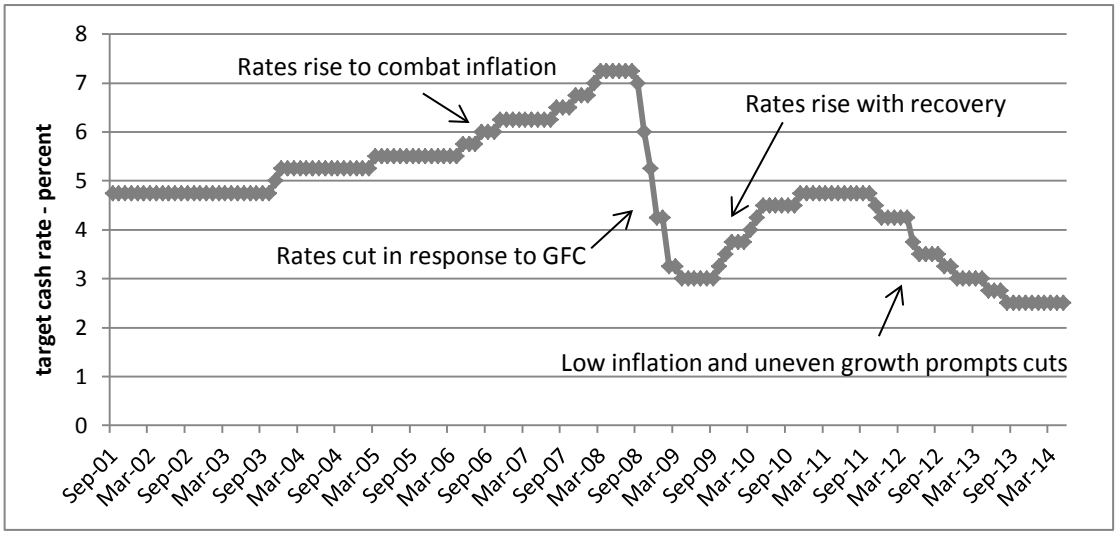
Figure 1.3.2: Seasonally adjusted annual GDP growth by quarter



Source: Reserve Bank of Australia (RBA), Australian Bureau of Statistics (ABS).

The timing of the events is reflected in the changes to the RBA target cash rate set out in Figure 1.3.3. From late 2009 until late 2010, rising inflation and restored growth saw the official interest rate rise progressively by 1.75%. Over the same period, unemployment fell to around 5.2%. In late 2011, however, the RBA changed tack and cut rates by 1% in three steps over a six month period to an expansionary 3.75% as inflation moderated. Over the next year, from May 2012 to May 2013, the cash rate fell by another 1% as unemployment hedged upwards. After a further downward revision in August 2013, the cash rate fell to a post-1990 low of 2.5%. (The average cash rate since 1990 has been 5.6 %.)

Figure 1.3.3: RBA target cash rate 2001 to 2014

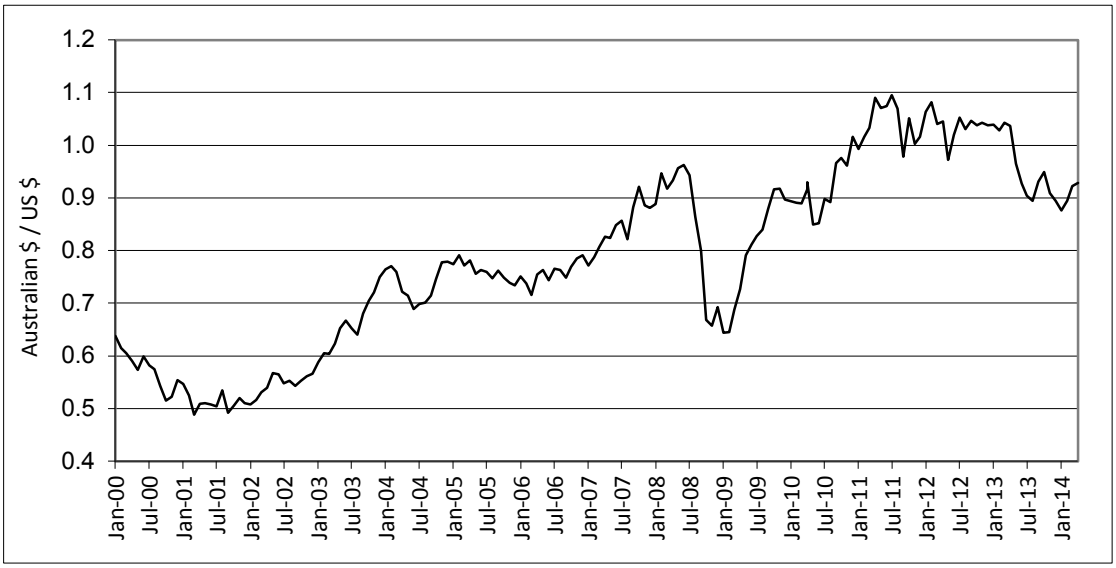


Source: RBA

Defence funding is affected by two economic parameters; the value of the Australian dollar—particularly relative to the US dollar—and the rate of inflation. These are explored below beginning with foreign exchange.

Defence spends something like $5 billion a year offshore (no official figure is available) mostly in contracts written in US dollars. And while Defence is insulated from foreign exchange fluctuations on a no-win, no-loss basis, the government, and ultimately the taxpayer, feels the pain or gain. In recent years, the USD–AUD exchange rate has fluctuated substantially, as Figure 1.3.4 shows. At the time of writing, the exchange rate was around US$0.93 having reached a post-float high of $1.11 against the US dollar in July 2011. The budget assumes a continuing rate of US$0.93.

Figure 1.3.4: Foreign exchange



Source: RBA

Since 2009-10, the Defence budget has received fixed 2.5% annual indexation, calculated from 2009-10 but only applied from 2013-14. (This is separate from and in addition to the adjustments made for foreign exchange). The relative percentage gain or loss compared with CPI and 'core' inflation is calculated in Table 1.3.1, including historical figures for comparison.

Table 1.3.1: CPI inflation, 'core' inflation and 2.5% indexation

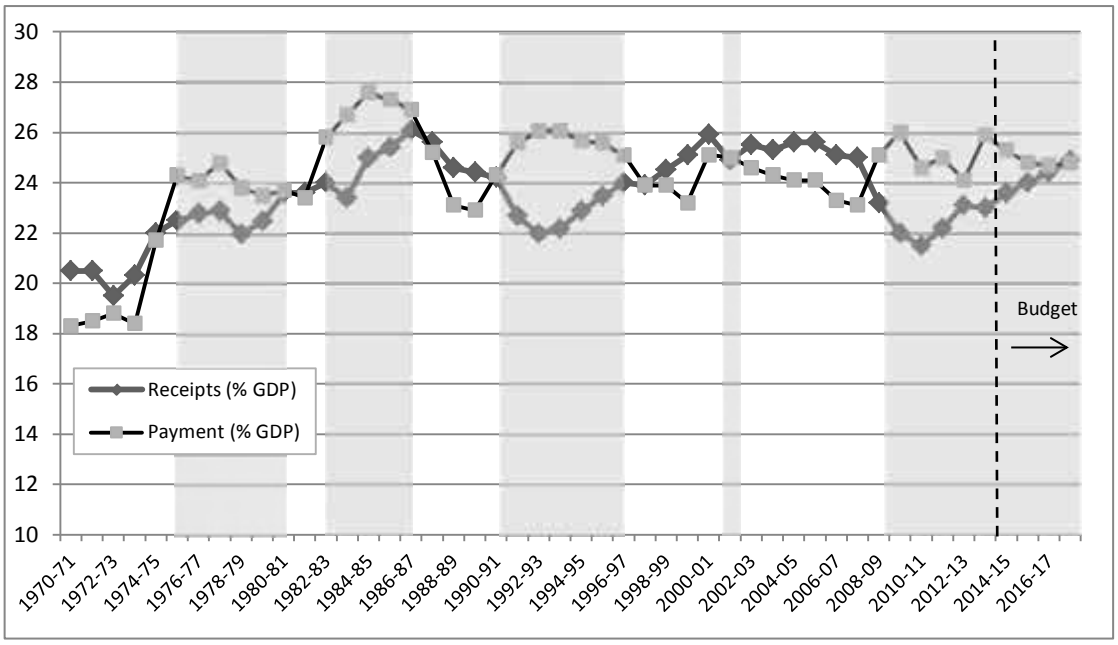
	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17
Fixed 2.5%	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
CPI	2.4	2.4	3.2	2.9	3.4	3.1	2.4	3.1	2.4	2.3	3.25	2.25	2.5	
Difference	0.1	0.1	-0.7	-0.4	-0.9	-0.6	0.1	-0.6	0.1	0.2	-0.7	0.25	2.5	
Fixed 2.5%	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
'core' inflation*	2.7	2.7	2.9	2.9	3.9	4.4	3.3	2.5	2.4	2.4				
Difference	-0.2	-0.2	-0.4	-0.4	-1.4	-1.9	-0.8	0.0	0.1	0.1				

Source: APH Library, RBA, ABS and Budget Papers. Average of the RBA weighted median and trimmed mean measures.*

1.4 Fiscal Context

Between 1970 and 1984, annual Australian Government payments grew from 18.3% to 27.6% of GDP (see Figure 1.4.1). Subsequently, payments moderated downward to around 23% and then fluctuated around an average of 24.8% of GDP up until the present day.

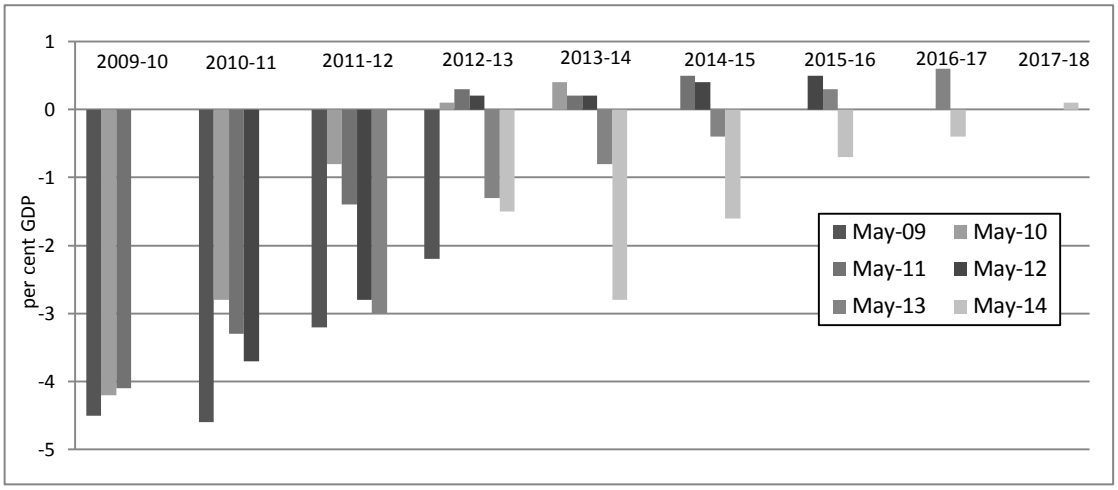
Figure 1.4.1: Australian Government payments and receipts 1970 to 2017



Source: Treasury Budget Papers, MYEFO 2013-14 and Budget 2014-15. Note: receipts are exclusive of Future Fund earnings.

Over the period 1970 to 2013, the Australian Government ran deficits in 25 out of 44 years, as marked in grey overshadow in Figure 1.4.1. The most recent excursion into deficit budgeting was caused by the GFC, which precipitated falling receipts, rising 'automatic stabiliser' spending and policy-led Keynesian spending. From 2009 onwards, there was a further deterioration of the government's fiscal outlook as revenues failed to materialise. Figure 1.4.2 graphs the dramatic changes to the fiscal outlook in successive official estimates from 2009 onwards.

Figure 1.4.2: The changing outlook—fiscal balance per cent GDP



Source: 2009-10 to 2014-15 Budget Papers

A more detailed comparison appears in Table 1.4.1, which compares the outlooks in May 2012, May 2013 and May 2014. Note the severe and continuing deterioration in the government's fiscal position between 2012 and today, deficits are shaded in grey. Key figures are as follows, the planned surplus (as at May 2012) for 2012-13 blew out by around $22 billion, and the predicted deficit (as at May 2013) for 2013-14 grew from $18 billion to $50 billion.

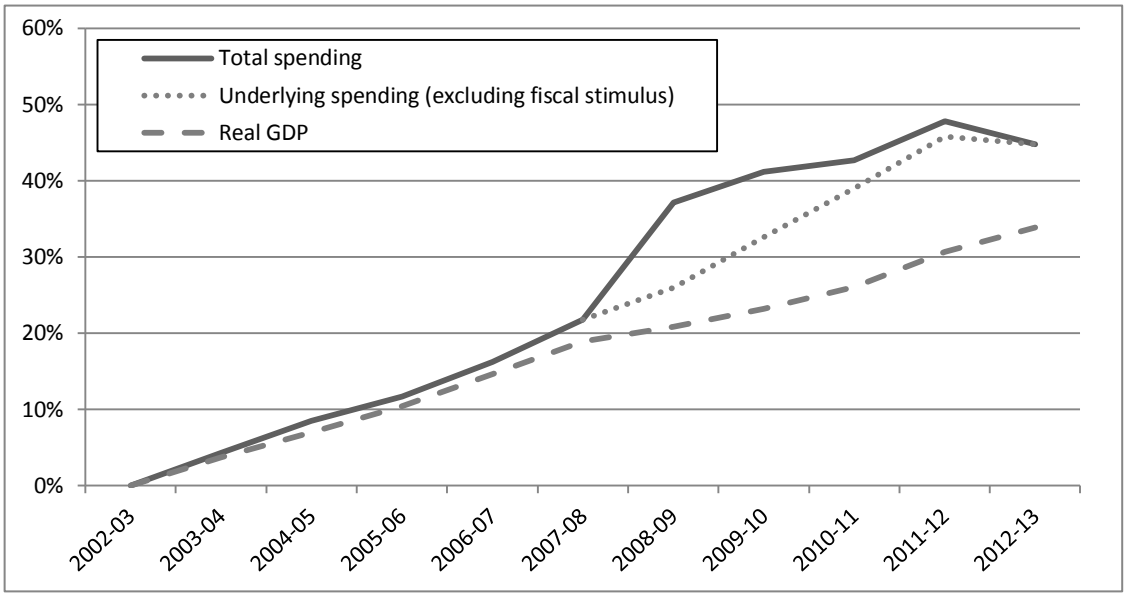
Table 1.4.1: Budget aggregates 2012-13 and 2013-14 Budgets (nominal billion dollars)

		Historical Figures							Budget Estimates			
		2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Budget 2012-13	Underlying cash	**19.7**	**-27.1**	**-54.8**	**-47.7**	**-44.4**	**1.5**	**2.0**	**5.3**	**7.5**		
	Per cent of GDP	1.7	-2.2	-4.3	-3.4	-3.0	0.1	0.1	0.3	0.4		
	Fiscal balance	**21.0**	**-29.7**	**-52.9**	**-42.0**	**-42.0**	**2.5**	**2.6**	**7.0**	**9.5**		
	Per cent of GDP	1.9	-2.4	-4.1	-2.8	-2.8	0.2	0.2	0.4	0.5		
Budget 2013-14	Underlying cash	**19.7**	**-27.1**	**-54.8**	**-47.7**	**-43.4**	**-19.4**	**-18.0**	**-10.9**	**0.8**	**6.6**	
	Per cent of GDP	1.7	-2.2	-4.3	-3.4	-2.9	-1.3	-1.1	-0.6	0.0	**0.4**	
	Fiscal balance	**21.0**	**-29.7**	**-52.9**	**-42.0**	**-44.5**	**-20.3**	**-13.5**	**-6.3**	**6.0**	**10.8**	
	Per cent of GDP	1.9	-2.4	-4.1	-2.8	-3.0	-1.3	-0.8	-0.4	0.3	**0.6**	
Budget 2014-15	Underlying cash	**19.7**	**-27.1**	**-54.8**	**-47.7**	**-43.4**	**-18.8**	**-49.9**	**-29.8**	**-17.1**	**-10.6**	**-2.8**
	Per cent of GDP	1.7	-2.2	-4.3	-3.4	-2.9	-1.2	-3.1	-1.8	-1.0	-0.6	-0.2
	Fiscal balance	**21.0**	**-29.7**	**-52.9**	**-42.0**	**-44.5**	**-23.5**	**-45.1**	**-25.9**	**-12.2**	**-6.6**	**1.0**
	Per cent of GDP	1.9	-2.4	-4.1	-2.8	-3.0	-1.5	-2.8	-1.6	-0.7	-0.4	0.1

Source: Treasury Budget Papers No. 1 for 2014–15 and beyond.

The worsening fiscal position was caused by a combination of increased spending and falling revenues. The Parliamentary Budget Office has produced a graph that succinctly captures the spending situation by plotting together the growth in GDP and government spending for the period 2002-03 to 2012-13 (see Figure 1.4.3).

Figure 1.4.3: Growth in government spending and GDP

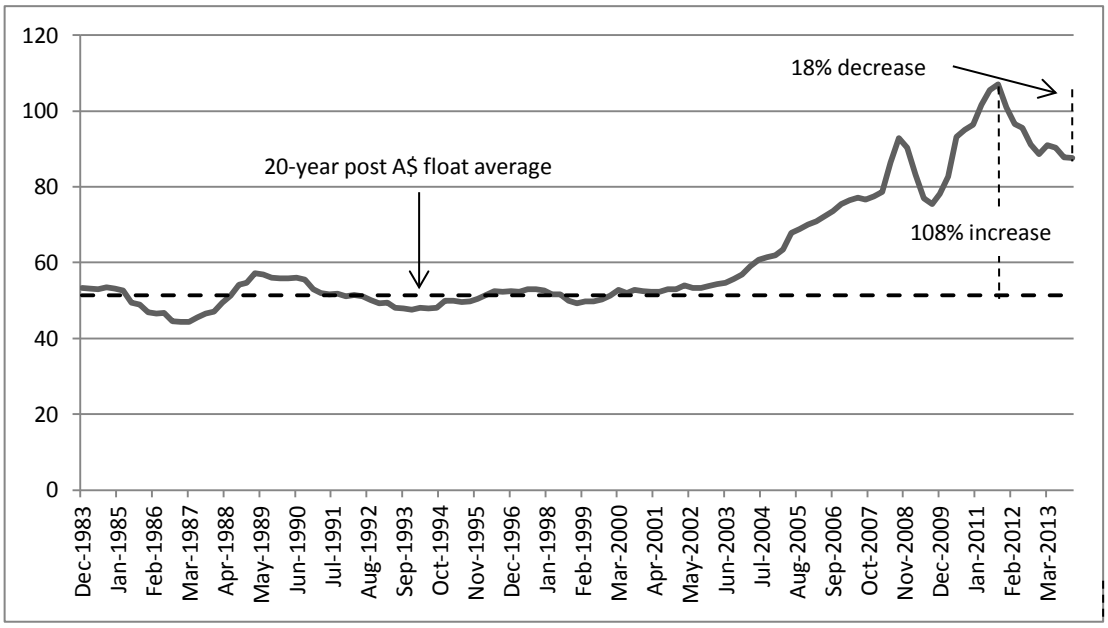


Source: Australian Government Spending Part 1, February 2013, Parliamentary Budget Office.

Consistent with Figure 1.4.1, Figure 1.4.3 shows that the GFC saw growth in government spending outpace GDP growth in 2008-09 and 2009-10. The result was an increase in government spending as a share of GDP that persists to this day, despite a downward excursion in 2012-13 reflecting a failed attempt to achieve a surplus in that year.

The recent deterioration in government revenues is due to several factors; including reduced company profits and sluggish nominal GDP growth (tax depends on nominal rather than real GDP levels). A key factor overall was the substantial fall in Australia's terms of trade, as shown in Figure 1.4.4.

Figure 1.4.4: Australia's terms of trade

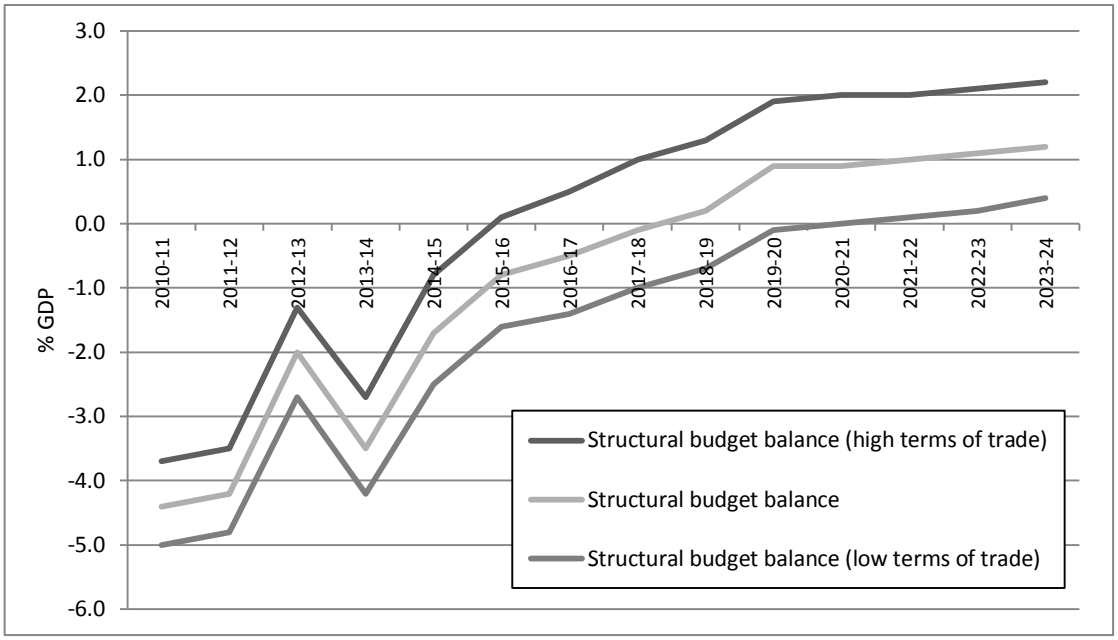


Source: ABS Australian National Accounts 5206.0.

The terms of trade measure the quantity of imports an economy can purchase per unit of exports. Concurrent with the mining boom, Australia's terms of trade grew substantially, reaching a historical peak in September 2011 before falling 18% to its current level. This year's budget assumes the terms of trade will decline 5% in 2013-14, 6.75% in 2014-15 and 1.75% in 2015-16. If larger falls occur, there'll be added pressure on government revenues.

The longer term fiscal picture is far from encouraging. As a result of temporarily favourable economic conditions last decade, Australia developed an unnoticed structural deficit that will persist even if and after growth returns to trend. The structural budget balance is an estimate of the difference between revenues and expenditure when transitory factors are accounted for. Put simply, as the one-off mining boom and terms of trade surge abated, rising expenditure quickly outstripped revenues and we moved into a structural deficit. Figure 1.4.5 shows the projected budget balance as estimated by Treasury in the May 2014 Budget.

Figure 1.4.5: Australia's estimated structural budget balance



Source: Treasury Papers, May 2014-15.

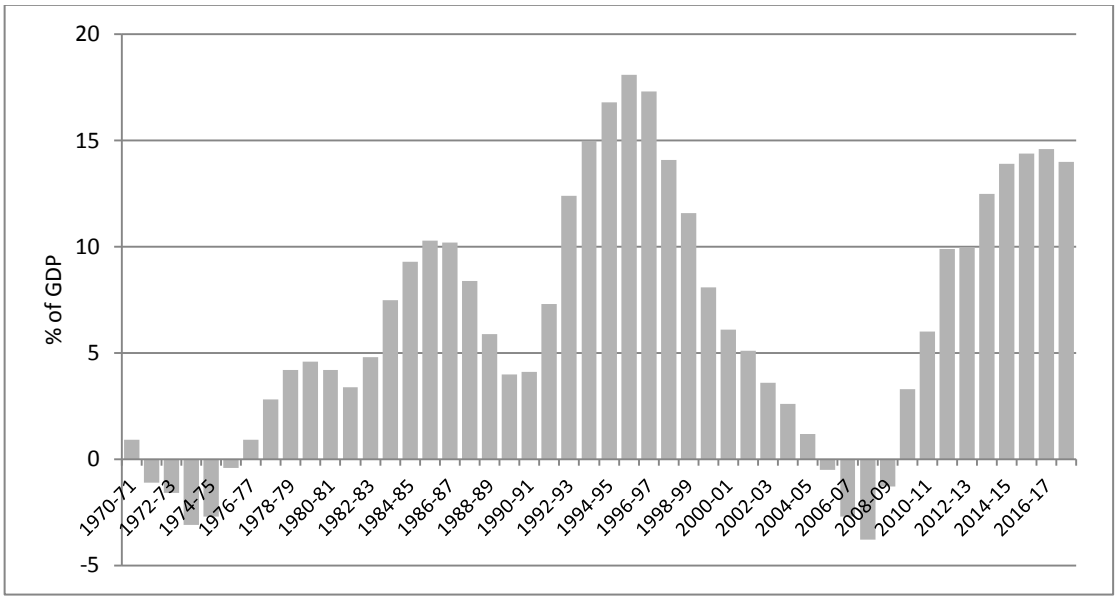
The slow return to a structural surplus shown in Figure 1.4.5 belies the true situation. Much of the fiscal recovery arises due to fiscal drag, or bracket creep, the process by which inflation progressively shifts individuals into higher tax brackets. Fiscal drag shifts the burden of taxation away from companies and onto individuals, thereby reducing the incentive to work. At the same time, fiscal drag lowers the balance point for progressivity in the income tax schedule.

In reality, future governments will almost certainly find it politically expedient to return at least some of the gains from fiscal drag by way of tax cuts. And if a future government wants to reform the taxation and welfare systems, fiscal drag provides a war chest to soften the blow of policy changes. So while it's possible to rely on fiscal drag to redress the structural balance, doing so would be both lazy and suboptimal. What's really required are long-term structural changes to government spending and revenues, hence the government's attention to such matters in this year's Budget.

Deficits result in debt. Fortunately, unlike most other advanced economies, Australia entered the GFC with no debt. As a result, our accumulated and projected debt is far below the daunting levels—typically 80-100% of GDP—faced by many European economies and the United States. Figure 1.4.6 shows the past and projected net Australian Government debt out to 2017-18. Note that growth in the economy coupled with the assumed slow remediation of the structural deficit (as explained above) results in debt peaking as a share of GDP in 2016-17.

Although a net debt of around 16% of GDP is far from alarming, the ongoing impost of interest payments is substantial. For example, in 2017-18 the Treasury estimates that the cost of servicing the debt will be $12.9 billion—more than enough to deliver a generous basket of government programs or around $1,000 in tax cuts for every worker in the nation.

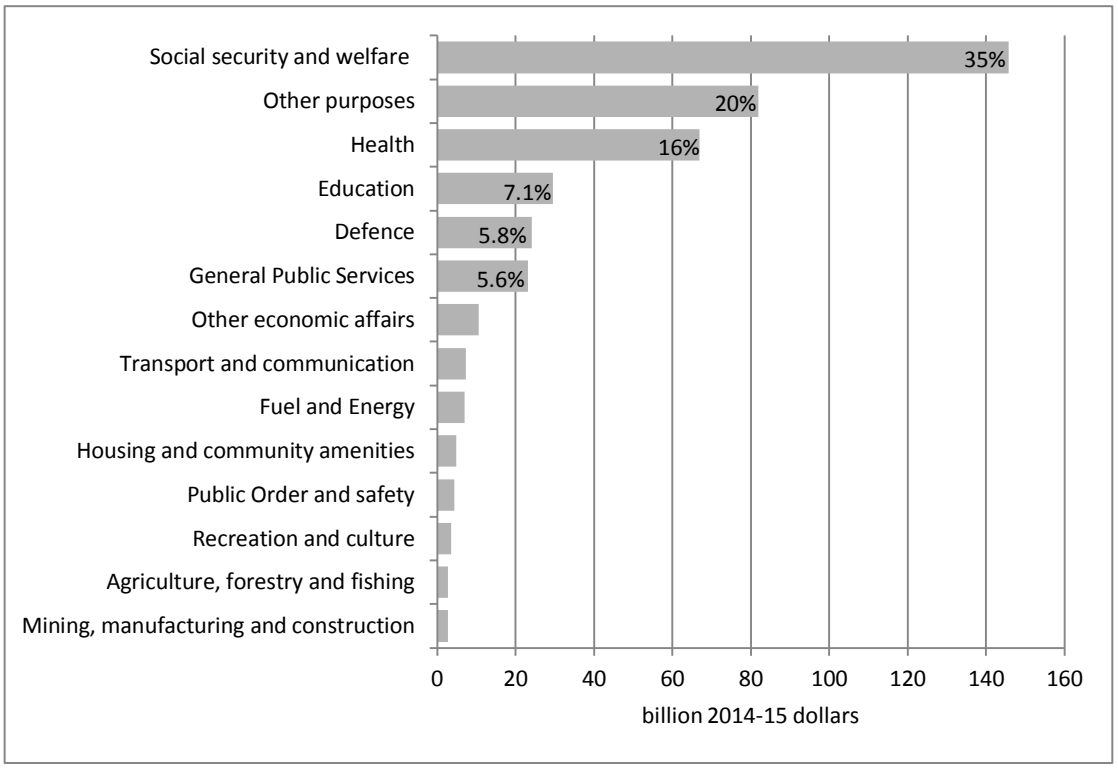
Figure 1.4.6: Australian Government net debt



Source: Treasury Papers, May 2014.

To put defence spending properly into a fiscal context, we turn now to examine the structure of Australian Government spending. Figure 1.4.7 shows Australian Government spending by function for 2014-15. As can be seen, defence spending accounts for a relatively small part of the total. The reputation of defence as a 'big spender' probably arose because it involves a small number of very large purchases rather than millions of small payments as occurs in health, education and social security. Note that in this chart defence spending excludes capital investment.

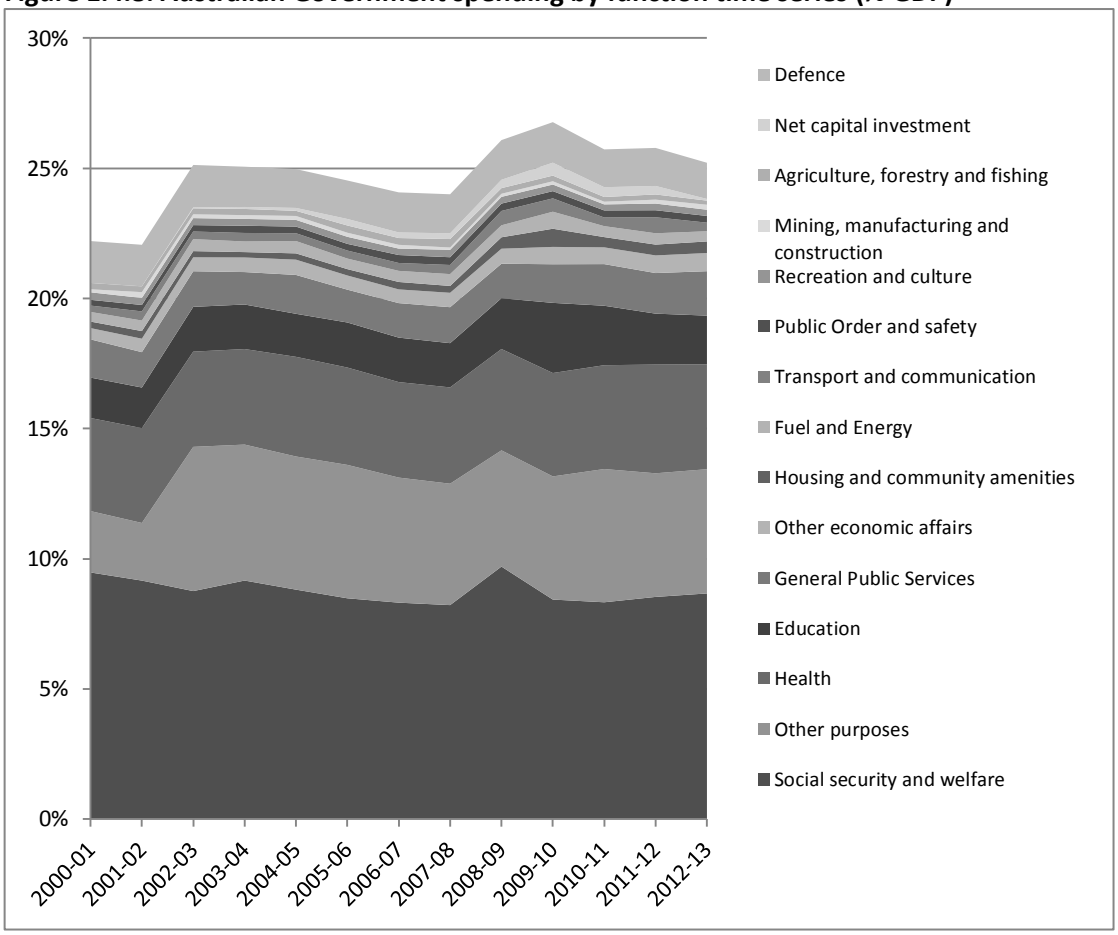
Figure 1.4.7: Australian Government expenses by function 2014-15



Source: 2014-15 Budget Papers

A time-series of Australian Government spending by function (Figure 1.4.8), reinforces the relative scale of defence spending and demonstrates that rising government spending has largely occurred in areas outside of defence.

Figure 1.4.8: Australian Government spending by function time series (% GDP)

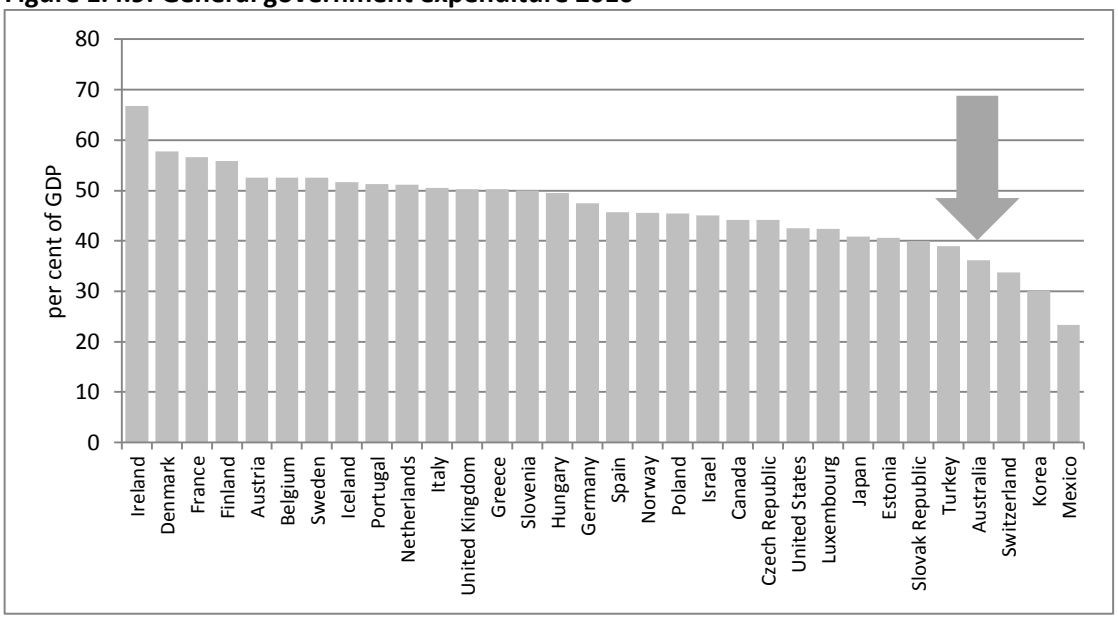


Source: Australian Government Spending Part 1, February 2013, Parliamentary Budget Office.

Comparing defence spending with other components of federal (i.e. Australian Government) spending fails to take into account the additional public revenues expended at the state and local level. In 2011, for example, federal spending accounted for only around 2/3 of public spending (source OECD statistics). Taking local and state government spending into account, defence spending represents only 3.9% of public expenditure in Australia. Even this figure fails to properly put defence spending into context. The denominator in the ratio (general government expenditure) is highly dependent on the extent to which the government intermediates between individuals and the providers of services such as health and education. The level of intermediation varies substantially between different countries, as demonstrated in Figure 1.4.9, which shows general government expenditure across the OECD.

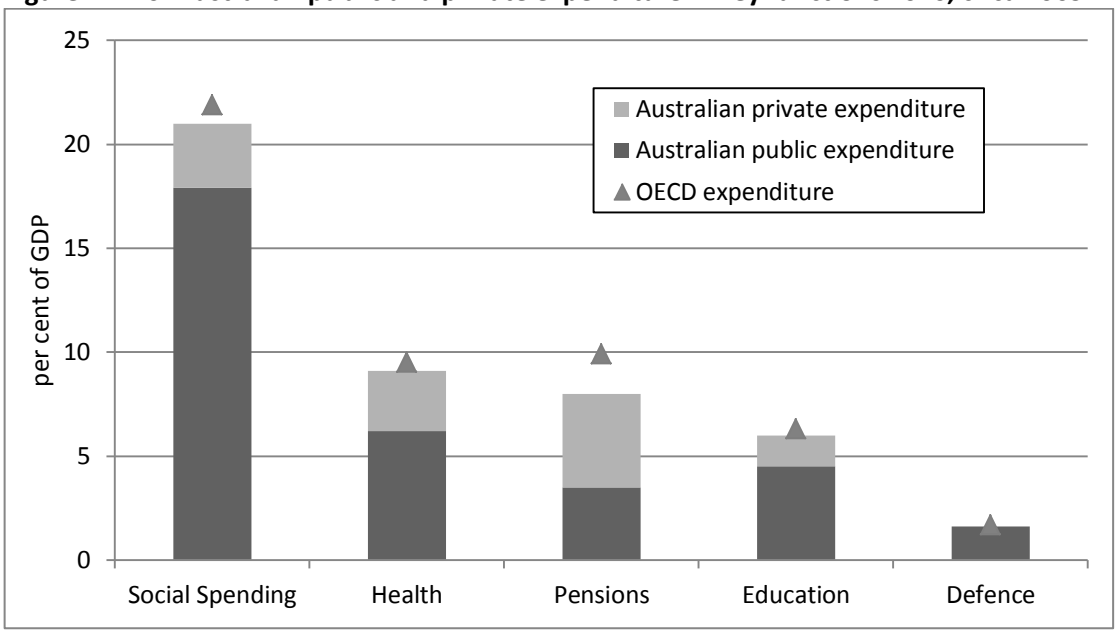
Because of Australia's relatively low level of general government expenditure, the percentage devoted to defence is higher than it would be otherwise. A better way to capture the true scale of defence spending relative to the usual cited 'opportunity cost' areas of social spending, health, pensions and education is to compare defence spending to the total (public plus private) expenditure in those areas. This is done in Figure 1.4.10.

Figure 1.4.9: General government expenditure 2010



Source: OECD Factbook, 2013.

Figure 1.4.10: Australian public and private expenditure in key functions 2010, circa 2009



Source: OECD Factbook, 2013 (Defence OECD figure is actually NATO European average for 2011). .

As is clear from the figure, defence expenditure is small compared with combined public and private expenditure in the four areas. Moreover, although Australia's general government expenditure is small by OECD standards, our public plus private expenditure in these areas is fully commensurate with the aggregate OECD expenditure.

The critical point to observe is that defence is different from the competing areas of expenditure in a very important respect. Although a shortfall in government spending on social, health, pensions or education can be made up for through private spending, only the government can provide the public good of defence in practice. Thus, any shortfall in the provision of defence by the government can't be remediated.

1.5 Defence Organisation and Management

The Outcomes and Program Framework

Since 2009-10, the Defence budget has been set out according to a framework of 'outcomes' and 'programs'. This replaces the 'outcomes' and 'outputs' framework established in 1999.

Outcomes are the results or benefits that the Commonwealth aims to deliver to the community through the work of its agencies. They are specified for each agency, and are meant to express the purpose or goal of each agency's activities.

Programs are activities that agencies undertake in pursuit of the outcomes they are expected to deliver.

The performance of agencies is measured under the framework. This is done through specific targets (like flying hours for Air Force) and, ultimately, the extent to which their programs actually deliver the outcomes intended. So the aim is to show not only how much an agency is *doing*, but how much it's actually *achieving.*

The Defence Outcomes

Since 2009-10, the Defence Outcomes have been:

Outcome 1: The protection and advancement of Australia's national interests through the provision of military capabilities and the promotion of security and stability.

Outcome 2: The advancement of Australia's strategic interests through the conduct of military operations and other tasks as directed by Government.

Outcome 3: Support for the Australian community and civilian authorities as requested by Government**.**

The programs that contribute to these three outcomes are set out in Figure 1.5.1. Note that the programs are closely aligned with the actual organisational structure of Defence, as can be seen by comparison with the Defence 'wiring diagram' in Figure 1.5.2.

This framework provides greater visibility of resources consumption within the organisation than the output-based approach that was in place up to 2007-08. But this comes at the loss of knowing what it costs to deliver military capability, which is what the old framework attempted to do. Ultimately, what really matters is how much it costs to deliver ships, planes and battalions ready for deployment, not how much money is spent on health services, legal advice or personnel management. Of course, in a perfect world we would be told both.

Curiously, at the same time as Defence's formal budget framework abandoned the concept of outputs in favour of an organisation-based program approach, the 2009 White Paper said Defence would move to an output-driven internal budgeting model. Forty-eight months on, we still don't know what this will entail or the extent—if any—to which it will be visible to the public. It would be ironic if Defence finally moved to an internal output-based budget after abandoning output-based external budgeting and reporting. It may be that the whole idea has been abandoned.

Figure 1.5.1: The Defence Outcome-Program framework

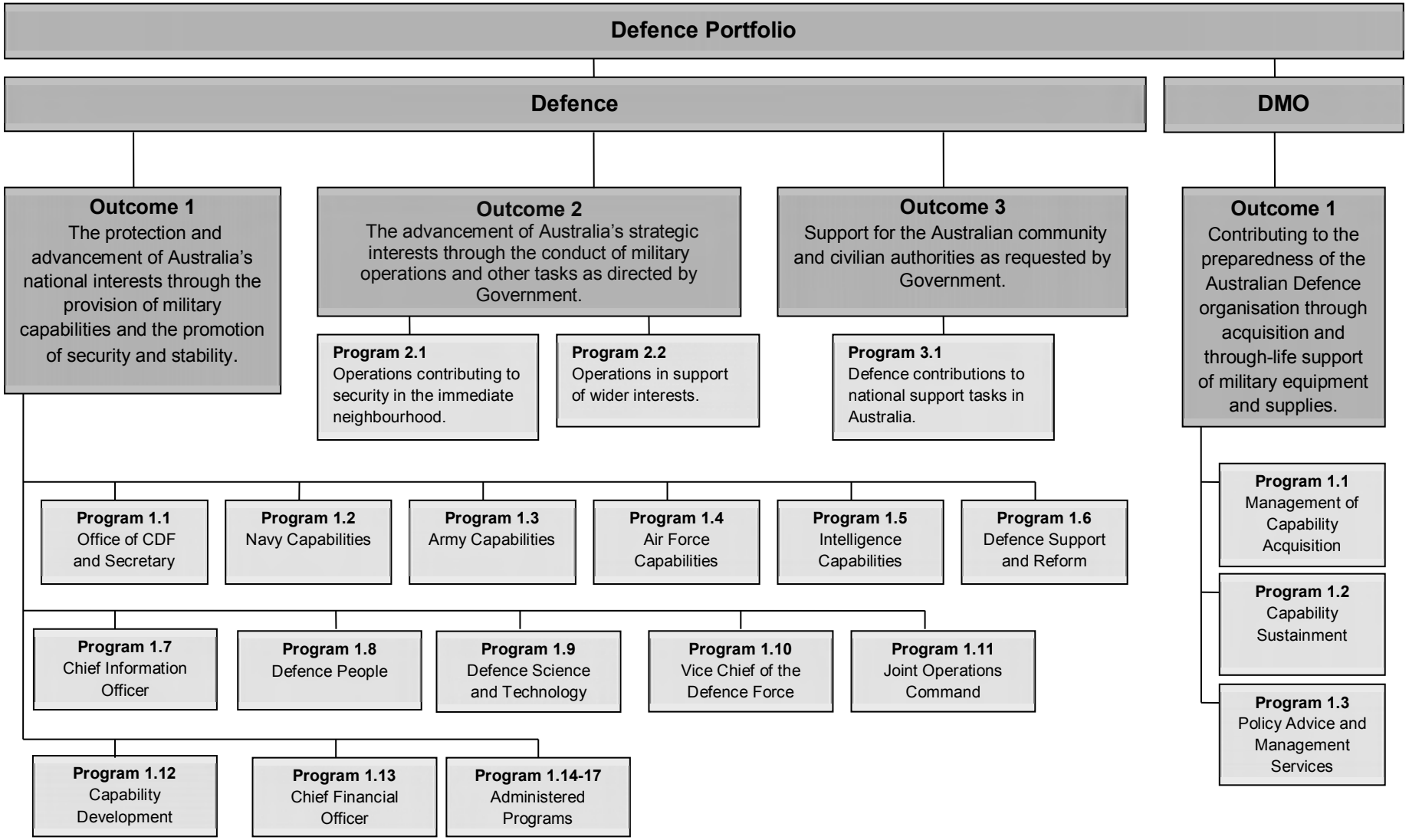
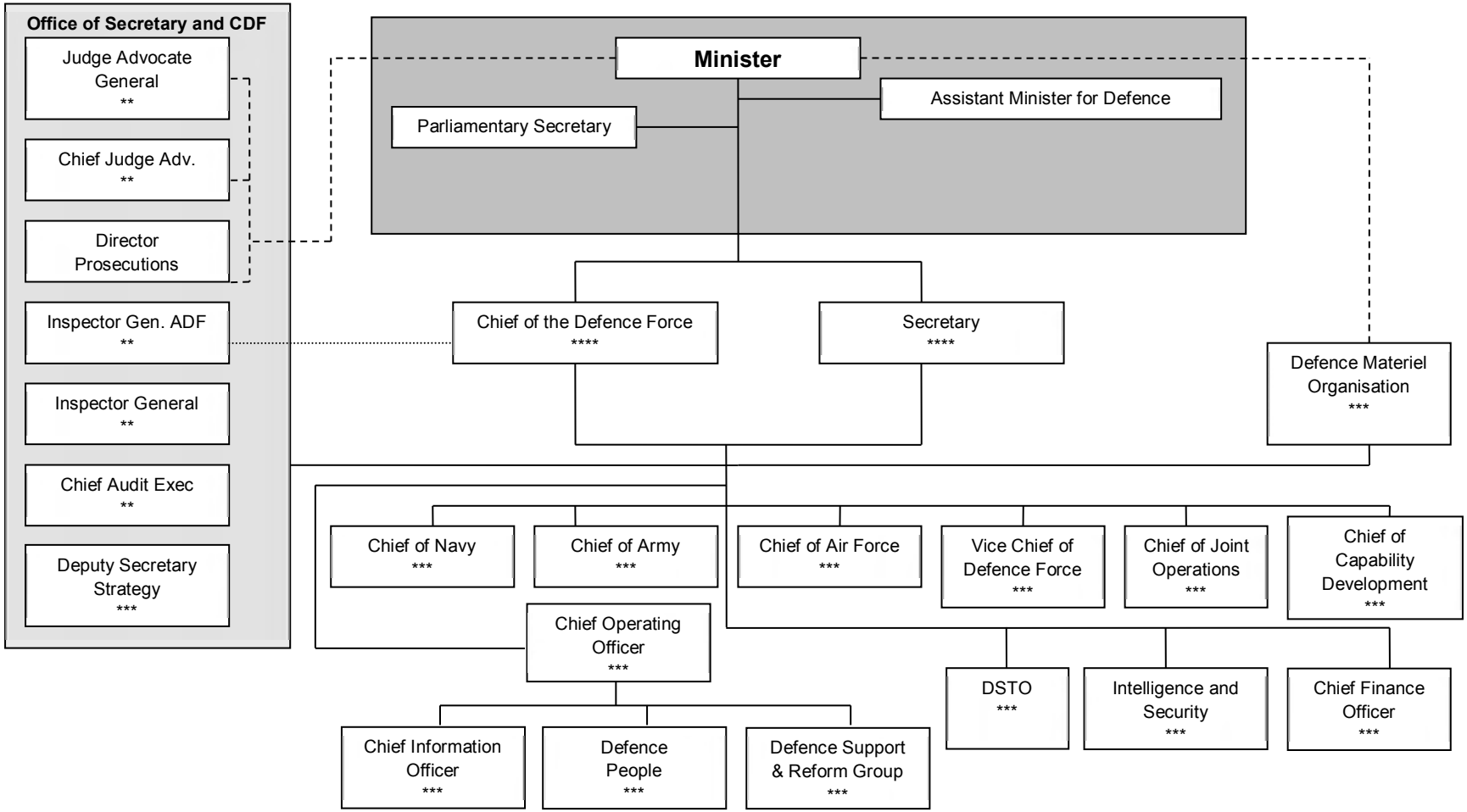


Figure 1.5.2: Defence organisational structure (as May 2014)



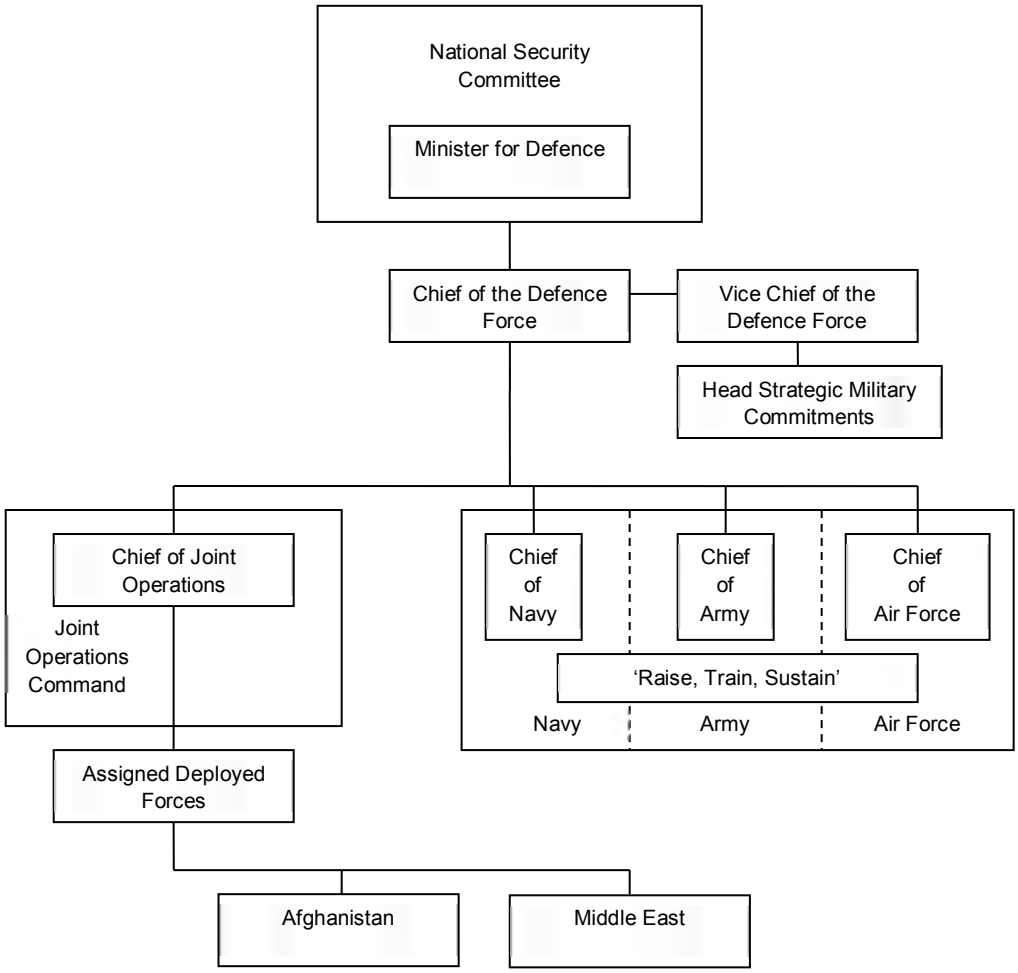
ADF command structure

It's important not to confuse the day-to-day management of the Department of Defence with the command of military operations. The former occurs through the diarchy of the CDF and Secretary and group/program arrangements outlined above. The latter is exercised through a formal command chain and dedicated headquarters structure.

On a day-to-day basis, the three Services (Navy, Army, and Air Force) are responsible for raising, training and sustaining their forces. When forces are deployed on operations or major exercises, the designated force elements are assigned to Headquarters Joint Operations Command (HQJOC) for that purpose. Since late 2008, HQJOC has been housed at a purpose-built facility near Bungendore in rural NSW and is staffed by around 750 personnel.

A more detailed outline of ADF command and HQJOC appears in Chapter 2.6 of this brief under Program 1.11.

Figure 1.5.3: ADF command structure



1.6 National Security Spending

The events of 9/11 prompted the recognition that no single agency has the capacity, or range of capabilities, necessary to ensure our security. The threat of terrorism within Australia, and to Australians abroad, has forced a whole-of-government approach to national security at the federal level. Even beyond the threat of terrorism, it's increasingly recognised that our national security interests are best served by a coordinated approach that uses all of the levers available to government.

It's beyond the scope of this Defence Budget Brief to analyse and explain the budgets of all the agencies that contribute to national security. Instead, we'll content ourselves with a broad-brush description of how much is spent in key agencies. If nothing else, it provides a useful yardstick against which we can measure what's spent on defence. Unfortunately, because of the difficulty in finding data, our discussion excludes spending at the state and local levels.

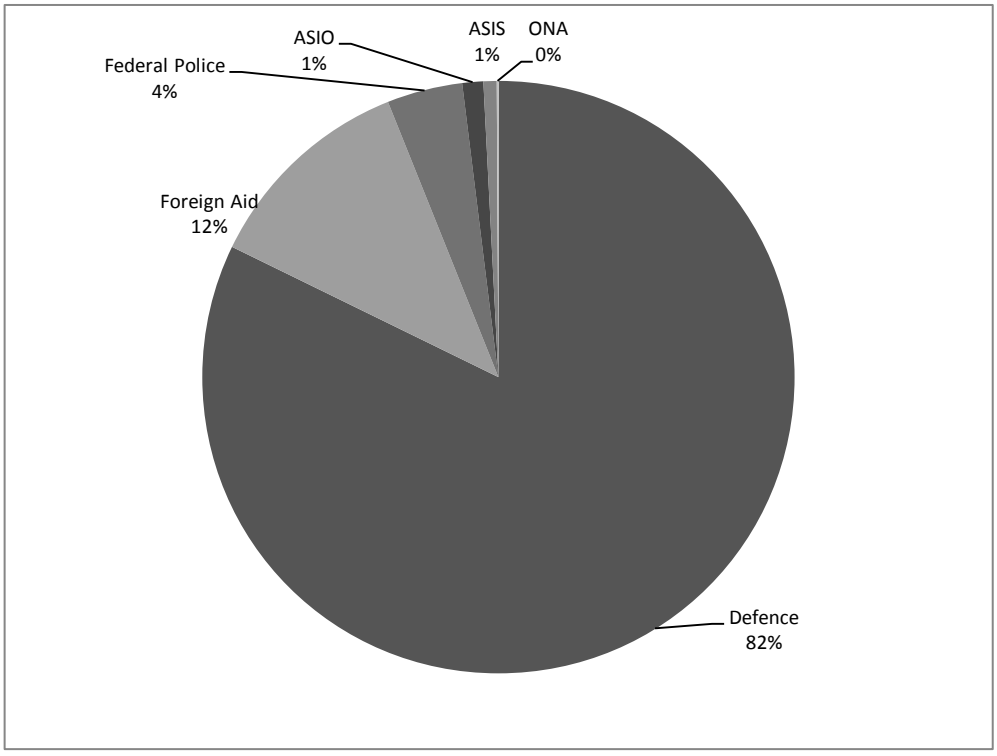
In late 2008 the government foreshadowed the introduction of a 'national security budget'. Nothing appeared in the 2009 Budget and the closest last year's budget came to it was a graph in the Budget Overview of Defence, non-Defence and Defence Operational spending. This reflects the high-level outcome of the government's coordinated national security budget process. A similar graph appeared in 2011 but has not been repeated. Given the absence of any further detail, we've updated our usual assessment of national security spending.

A number of federal agencies can make a credible claim to delivering some part of our national security. In selecting agencies, we've taken a liberal view of what constitutes national security, although we've excluded funding for outcomes within agencies that are clearly unrelated. Here's our list, which can't claim to be exhaustive, in alphabetical order:

- Australian Federal Police (AFP)
- Australian Security Intelligence Organisation (ASIO)
- Australian Secret Intelligence Service (ASIS)
- Department of Defence (DOD)
- Overseas Development Assistance (DFAT)
- Office of National Assessments (ONA).

Clearly, some of the activities of the listed agencies (even with the restriction to specific outcomes) go beyond national security. Conversely, other agencies that have been left out, like the Australian Customs and Border Protection Service, make a significant contribution to national security within their broader range of responsibilities. Such is the challenge of dealing with the aggregated data available in the budget papers. Figure 1.6.1 compares the appropriations allocated to each of the aforementioned agencies in 2014-15. Note that because of the absorption of AusAID into DFAT, care should be taken comparing Overseas Development Assistance in 2014-15 to that in earlier years.

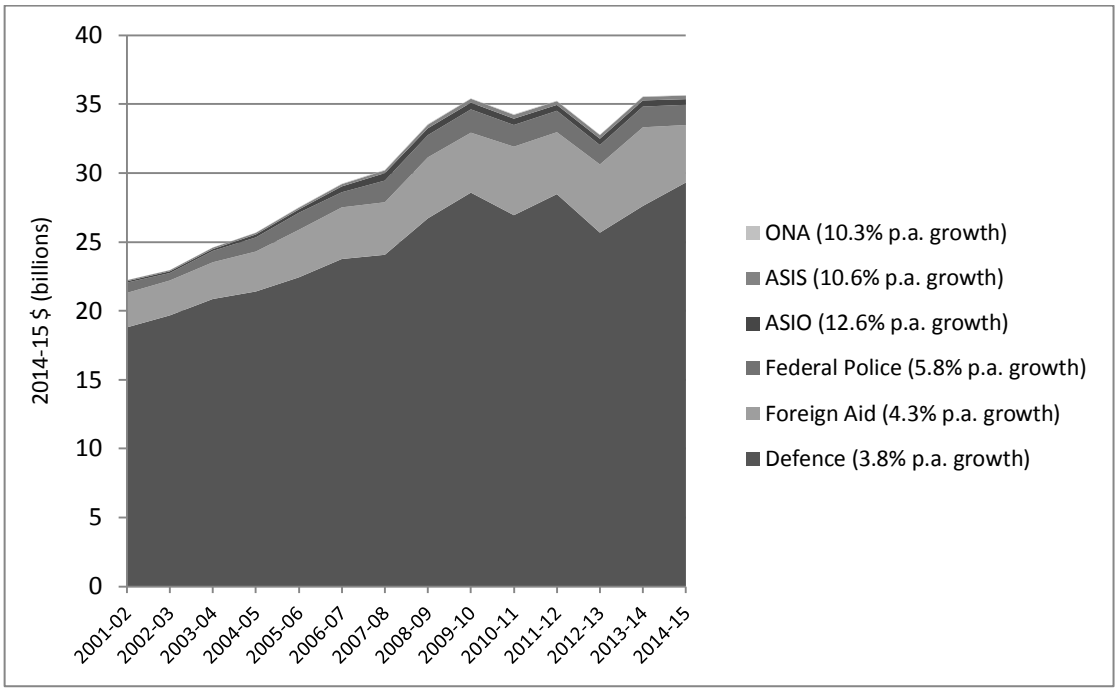
Figure 1.6.1: Federal national security spending



Source: 2014-15Budget Paper No. 4 and ASPI calculation of Net Defence Funding

Figure 1.6.2 shows the real growth in spending by various national security agencies since 2000-01. Because changes in outputs and the presentation of budget figures make it difficult to extract precisely comparable figures from year to year, the numbers should be used with caution—though the broad trends are clear.

Figure 1.6.2: Federal national security appropriations 2001-02 to 2013-14



Source: 2002-03 to 2014-15 Budget Paper No. 4 and ASPI calculation of Net Defence Funding. [All growth rates compounding.]

1.7 Measuring Defence Spending

The amount a country spends on defence is a direct measure of its commitment to protect itself. Accordingly, a lot of attention is placed on comparing levels of defence spending between countries and on tracking the rates at which those levels are increasing or decreasing. For example, here in Australia, a lot of attention was placed on achieving 3% real growth in the Defence budget during the 2000s. It's important, therefore, that reporting of defence spending captures what's actually going on.

Table 1.7.1 sets out the presentation in the 2014-15 Portfolio Budget Statement (PBS) [Table 2, p.16] excluding the administered appropriations. (We ignore the administered appropriations for superannuation and housing because they aren't controlled by Defence and are appropriated through the organisation for convenience.) The bottom line is *Total Defence Funding* which, in the past, has been presented in the PBS as 'the most common way of presenting the Defence budget' [2008-09 PBS, p.119].

Table 1.7.1 Total Defence funding FY 2014-15

	2014-15 $'000
Departmental	
1. Output Appropriation	25,882,986
2. Equity Injection	2,463,678
3. Prior Year Appropriation	
4. Current year's appropriation (1+2+3)	**28,346,664**
5. Drawdown of appropriations carried forward	
6 Other appropriation receivable movements	
7. Returns to Official Public Account (OPA)	-853
8 Funding to/from OPA (5+6+7)	**-853**
9. Funding from Government (4+8)	**28,345,811**
9. Capital Receipts	97,224
10. Own-source Revenue	859,673
11. Funding from other sources (9+10)	**956,897**
12. Total Defence Funding (9+11)	**29,302,708**

Source: 2014-15 PBS

The easiest way to explore what a better approach might be is to examine each of the elements appearing in Table 1.7.1.

Current year's appropriations: This is the least ambiguous part of the problem. Each year the government formally appropriates money to Defence. The breakdown of the appropriation in terms of outputs and equity is an artefact of accrual accounting that needn't concern us. What matters is that this is the quantum of cold hard cash the government plans to make available to Defence for the financial year. As such, any credible measure of Defence funding must include this money.

Drawdown of appropriations carried forward: Because funding may either be spent or received in a year other than the appropriation year, an Appropriation Receivable account is utilised. This recognises that departmental Appropriations don't lapse unless specifically extinguished by the Minister for Finance and shifts to this account represent either the expenditure of additional public funds by Defence or the return of unspent funds. To properly track the funding employed by Defence, it makes good sense to take account of increases and decreases to the Appropriation Receivable account. However, if this is accepted, it follows that changes to Defence's cash holdings must also be accounted for (since that's where the money in the appropriation receivable came from originally).

Capital Receipts: As custodian of more than $50 billion of public assets including land, buildings and military equipment, Defence inevitably receives cash from the disposal of items that are no longer needed. Some of this money is returned to government via a Return to the OPA. The remainder is retained by Defence and is called Net Capital Receipts. Given that Net Capital Receipts are generated from the sales of public assets, it's correct to count this income as part of Defence funding.

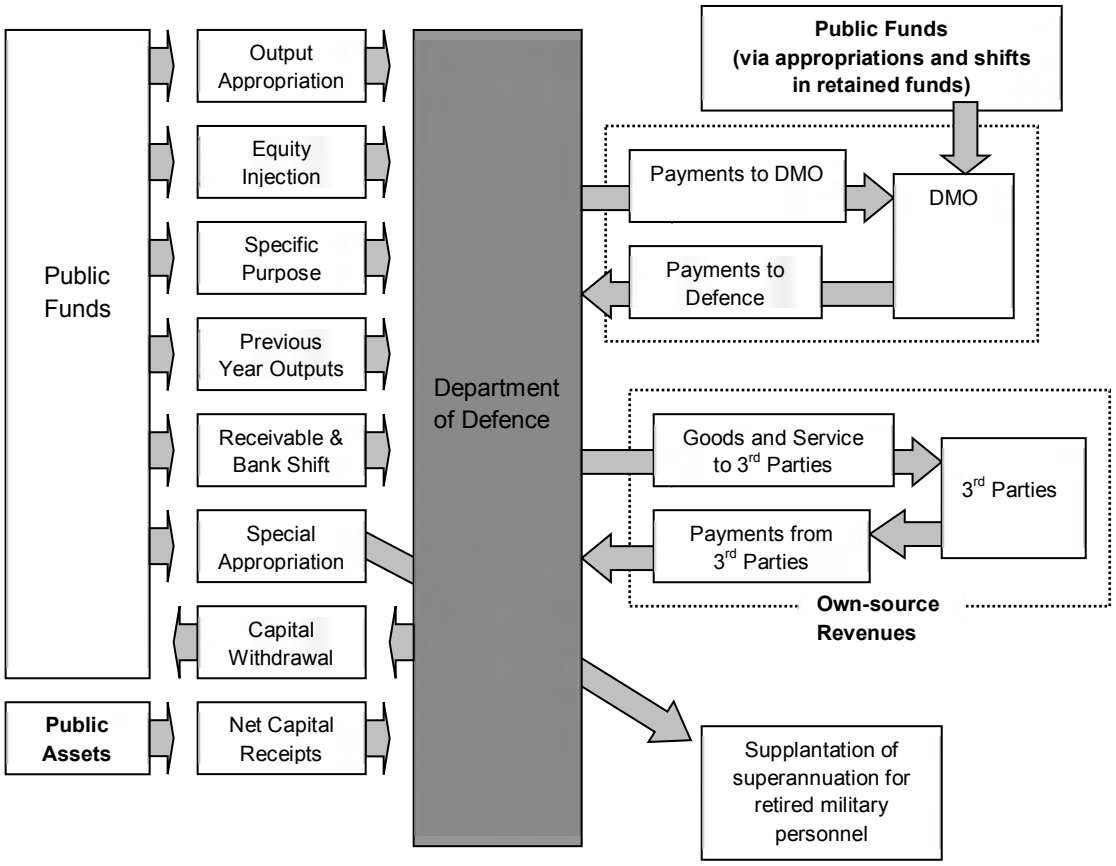
Own-source Revenues: Defence receives revenue from a number of sources. These include the supply of goods and services to third parties such as Defence personnel, who pay a share of the cost of their food and lodging provided by Defence, and foreign governments that purchase items like fuel. It makes little sense to include this as part of Defence funding. While it's perhaps reasonable to include revenue raised by using public assets (like Defence accommodation), the vast bulk of Own-source Revenue reflects Defence acting as an intermediary that transfers goods between 3rd party providers and 3rd party customers.

For example, the sale of fuel to a foreign government or rations to personnel delivers no revenue to Defence that's not at least equal to the cost of doing so. Or to put it another way, no one could seriously contend that Defence funding has risen by $50 million simply because, for example, an extra $50 million of fuel was purchased and sold on to the United States.

Own-source Revenues also includes transfers from the Defence Materiel Organisation (DMO) to Defence. For example, DMO will pay Defence $266 million in 2014-15 [PBS page 137] primarily for the cost of the military personnel provided by Defence to DMO. The DMO is appropriated for civilian and military personnel as it requires the expertise of military personnel within its project delivery and equipment sustainment functions. The DMO then pays Defence to offset Defence's cost of providing the military expertise. This works in a similar fashion to fuel sales where Defence 'sells' goods and services to DMO to offset the cost of providing those goods and services. This isn't double counted in Table 2 (page 16) of the PBS as these figures are only those of Defence.

There are a number of tables that consolidate the Defence and DMO picture but another way of doing this is to combine Table 2 with DMO's direct appropriations and any revenue received by DMO from sources other than Defence. Figure 1.7.1 is our best attempt to depict the situation graphically, though some simplification has been necessary.

Figure 1.6.1: Defence Cash and Resource Flows



To complicate matters further the estimated actual figure for the current financial year in PBS Table 2 includes payments to DMO that may eventually remain unspent (noting that some underspends have been dealt with by extinguishing appropriations). Indeed, over a four-year period last decade, more than $927 million accumulated in the DMO Special Account, including $414 million from 2007-08. In some years, the Special Account is drawn down while in others it grows.

From a strict accounting perspective, no rules have been broken. Defence reports its funding accurately, and DMO reports its cash flow properly. Yet there's something surreal about failing to reconcile the net impact of the two things to show what's actually going on, especially given the high prominence of Defence funding in recent years.

So what is the 'Defence budget'?

While there's an accounting distinction between Defence and DMO, any sensible calculation of the 'Defence budget' must reflect the total impost on the taxpayer in delivering defence capability. This is easily achieved by adding DMO funding to the calculation and ignoring the transfer back and forth of money in between. Once again, the PBS contains a consolidation of the Defence and DMO budgets but it isn't especially illuminating.

In light of the foregoing discussion, it seems sensible to include Funding from Government, Net Capital Receipts (= Capital Receipts – Return to OPA), Net Bank Balance Shifts, Appropriation Receivable and Special Account Shifts, but to exclude Own-source Revenue. And then to do the same for DMO and then add the results together, safe in the knowledge

that the accounting transfers between the two entities have been excluded (Table 1.7.2). The addition of DMO appropriations is especially important because under present arrangements, DMO directly receives around $881 million which used to be provided by Defence.

Table 1.7.2: Total Defence resourcing FY 2014-15

	Total Defence Funding	ASPI Net Defence Spending
Departmental		
1. Output Appropriation	25,882,986	25,882,986
2. Equity Injection	2,463,678	2,463,678
3. Prior Year Appropriation		
4. Current year's appropriation	**28,346,664**	**28,346,664**
5. Drawdown of appropriations carried		
6 Other appropriation receivable movements		
7. Returns to OPA	-853	-853
8. Funding from Government	**28,345,811**	**28,345,811**
7. Capital Receipts	97,224	97,224
8. Own-source Revenue	859,673	
9. Funding from other sources	956,897	97,224
10. DMO Appropriation		881,031
11. DMO drawdown of Special Account		-4,088
12. Total Defence Funding	**29,302,708**	
13. ASPI Net Defence Funding		**29,319,987**

The difference isn't large. Our calculation of Net Defence Funding yields a figure only 0.06% higher than Total Defence Funding. The difference would be larger if not for the almost complete (but entirely coincidental) cancellation of Own-source Revenues and direct appropriation to DMO. Nonetheless, we believe *ASPI Net Defence Funding* is a better measure of the 'Defence budget' than *Total Defence Funding.*

Chapter 2 – Defence Budget 2014-15 PBS Explained

The 232 pages of the 2014–15 Defence Portfolio Budget Statements (PBS) set out the government's plan for the expenditure of around $29.3 billion by Defence in the coming financial year.

This guide explains and where possible analyses the information in the PBS. In doing so, we skim over those parts of the PBS that are relatively clear, and focus on those areas where explanation might be useful.

Some of the material that follows is unavoidably technical due to the disciplines and complexities of accounting. However, it is not necessary to read this chapter as a whole, or in sequence, to gain insight. Every attempt has been made to enable the reader to jump in and look at those items of most interest.

This Brief does not cover in any detail the funds administered by Defence on behalf of the government for superannuation and housing support services for current and retired Defence personnel.

Most parts of the guide are best read with the PBS at hand. Copies can be downloaded from the web at <http://www.defence.gov.au/budget/>.

The PBS begins with something akin to an executive summary [PBS p. 1–12] that provides a useful snapshot of governance arrangements, resources and portfolio structure for Defence plus DMO. Rather than recount this material, we turn now to examine the main body of the document.

2.1: Strategic Direction Statement [PBS Section 1.1]

The overview chapter of the PBS begins with a discussion of Defence's role; 'to protect and advance Australia's strategic interests through the provision of appropriately prepared and equipped armed forces'. It goes on to discuss the forthcoming 2015 Defence White Paper and details current initiatives, including operations, force development and international defence engagement. Specific issues noted include continuing operations in the Middle East and Afghanistan, the introduction of new amphibious vessels into service, the reorganisation of the Army under Plan BEERSHEEBA and the US marine training program in Northern Australia.

2.2: Resourcing [PBS Section 1.2 & 1.3]

The 'rubber hits the road' in Sections 1.2 and 1.3 of the PBS, in terms of allocating money to get things done. It contains the resource statements, new budget measures and the funding bottom line.

How much money will Defence get?

On page 16 of the PBS, we get to the heart of the issue. Table 1 gives three key figures for the Defence budget:

- **Funding from Government,** being those funds formally *appropriated* to Defence by the government for departmental purposes along with shifts in appropriations receivable (unspent money from previous years). In 2014-15 this will amount to $28,345,811,000.
- **Total Defence Funding,** being those funds actually *available* to Defence including appropriations and revenue from other sources. In 2014-15 this will amount to $29,302,708,000.
- **Total Defence Resourcing,** being Total Defence Funding plus those funds appropriated administratively through Defence for superannuation and defence housing subsidies. In 2014-15 this will amount to $34,219,310,000.

Of these three figures, *Total Defence Funding* is the one most usually quoted as the Defence budget. It represents the funds expended by Defence to deliver the departmental outcomes and maintain the ongoing program of investment in new equipment and facilities. Note, *Total Defence Funding* does not include administered funds for superannuation and defence housing subsidies.

However, as explained in the last chapter, *Total Defence Funding* is inflated by a churning of money that delivers no military capability or outcome, and ignores funds appropriated directly to DMO. What's more, Total Departmental Funding ignores the money which has at times accumulated or been drawn out of the DMO Special Account—in effect transferring money from one year to another. We believe that the *ASPI Net Defence Spending* figure accounts for these issues properly and therefore gives a more accurate picture of how much is being spent on delivering defence capability and outcomes. Henceforth, we will only present the *ASPI Net Defence Funding* figure. Fortuitously, it does not make a lot of difference; the inclusion of churned money in *Total Defence Funding* more or less

compensates for omitting the money appropriated to DMO—around $900 million in each case.

How much money will Defence receive?

Table 2.2.1 displays Defence funding for the past thirteen, and next four, financial years. Also shown are both the nominal and real year-to-year percentage growth rates.

Table 2.2.1: ASPI Net Defence Funding – real (2014-15$) and nominal

	Funds (nominal)	Growth (nominal)	Funds (real)	Growth (real)
01-02	13,191	7.08%	18,810	4.11%
02-03	14,216	7.78%	19,681	4.63%
03-04	15,439	8.60%	20,871	6.05%
04-05	16,224	5.09%	21,417	2.61%
05-06	17,547	8.15%	22,443	4.79%
06-07	19,140	9.08%	23,776	5.94%
07-08	20,038	4.69%	24,081	1.28%
08-09	22,933	14.45%	26,727	10.99%
09-10	25,104	9.46%	28,593	6.98%
10-11	24,403	-2.79%	26,956	-5.73%
11-12	26,381	8.10%	28,485	5.67%
12-13	24,417	-7.44%	25,778	-9.50%
13-14	27,027	10.69%	27,636	7.21%
14-15	29,320	8.48%	29,320	6.10%
15-16	30,432	3.79%	29,690	1.26%
16-17	30,472	0.13%	29,003	-2.31%
17-18	32,988	8.26%	30,633	5.62%

Source: 2014-15 PBS, and *earlier Defence Annual Reports (DAR).*

When calculating the real growth rate, the nominal dollar values of the individual years have been converted to a single base year using the Consumer Price Index (CPI) so as to reflect the opportunity cost incurred by the taxpayer. Note that this is not the deflator used within government to adjust the defence budget from year to year. From 2001-02 until 2009-10 this was the implicit Non-Farm GDP Deflator (NFGDPD) and from 2009-10 onwards it has been fixed at 2.5% in accord with the funding model introduced in the 2009 Defence White Paper.

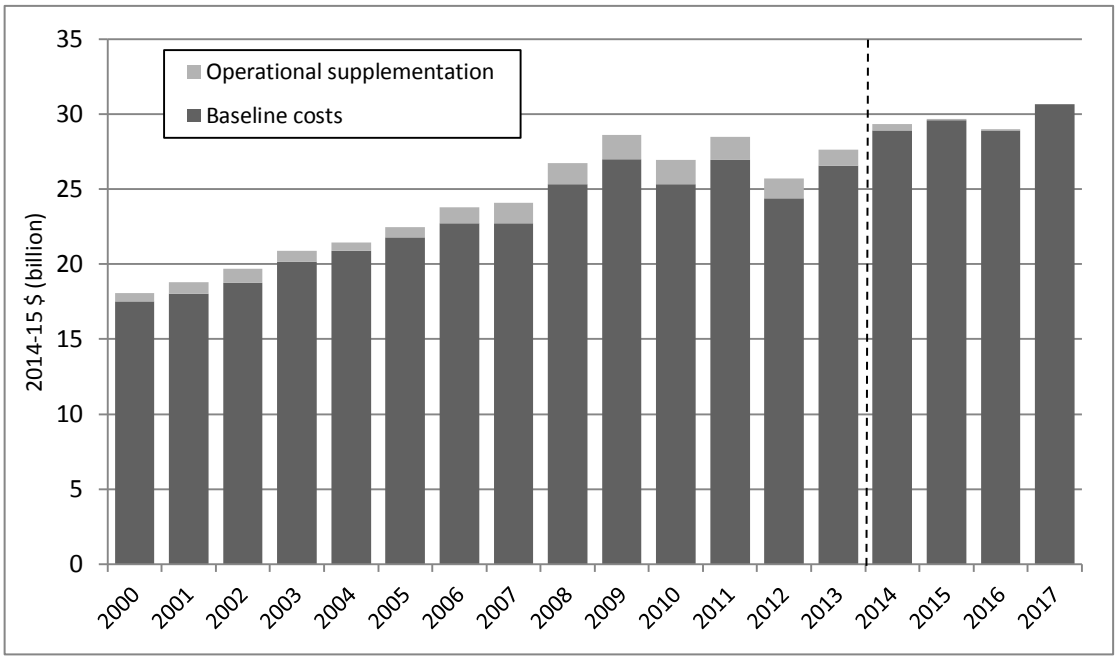
Those who believe that 3% is somehow a magic benchmark of merit for defence spending should be pleased. The average *arithmetic* annual rate of real growth in the budget since 2000-01 (the last year prior to the 2000 White Paper) to 2014-15 is 3.7%. Over the same period, the effective *compounding* annual rate of real growth is 3.5%.

Looking forward, things are not so encouraging. Over the four years covered by the budget and estimates, the average *arithmetic* annual rate of real growth in the budget from 2014-15

to 2017-18 comes out to be 1.5%. Over the same period, the effective *compounding* annual rate of real growth is the same.

These calculated growth figures should be viewed with some caution due to the perturbing effect of operational supplementation, see Figure 2.2.1. A fuller analysis of trends in defence spending appears in Chapter 3 of this brief, including the prospects for the government achieving its promise of 2% of GDP by 2023-24.

Figure 2.2.1: Real Net Defence Funding – 2000 to 2017



Source: 2014-15 PBS, 2012-13 PAES and earlier DAR. 2005 = 2005-06 etc.

What is the Defence share of GDP?

Table 2.2.2 gives Net Defence Funding as a percentage of GDP for recent and future years. As shown, the share of GDP will rise from 1.71% in 2013-14 to 1.80% in 2014-15. (Last year's estimate has gone up due to shifts in both foreign exchange, spending and GDP.) Over the following three years, sluggish real spending growth and a rising economy will depress the GDP share. Note that, current and recent spending is boosted by high levels of operational supplementation that are not reflected in the latter years of the forward estimates.

Table 2.2.2: ASPI Net Defence Funding as a percentage of GDP

00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18
1.74	1.75	1.77	1.79	1.76	1.76	1.77	1.70	1.83	1.94	1.74	1.78	1.60	1.71	1.80	1.78	1.70	1.75

Source: Analysis of data from 2014-15 Budget Overview, 2014-15 PBS and earlier DAR

What is the Defence share of Commonwealth payments?

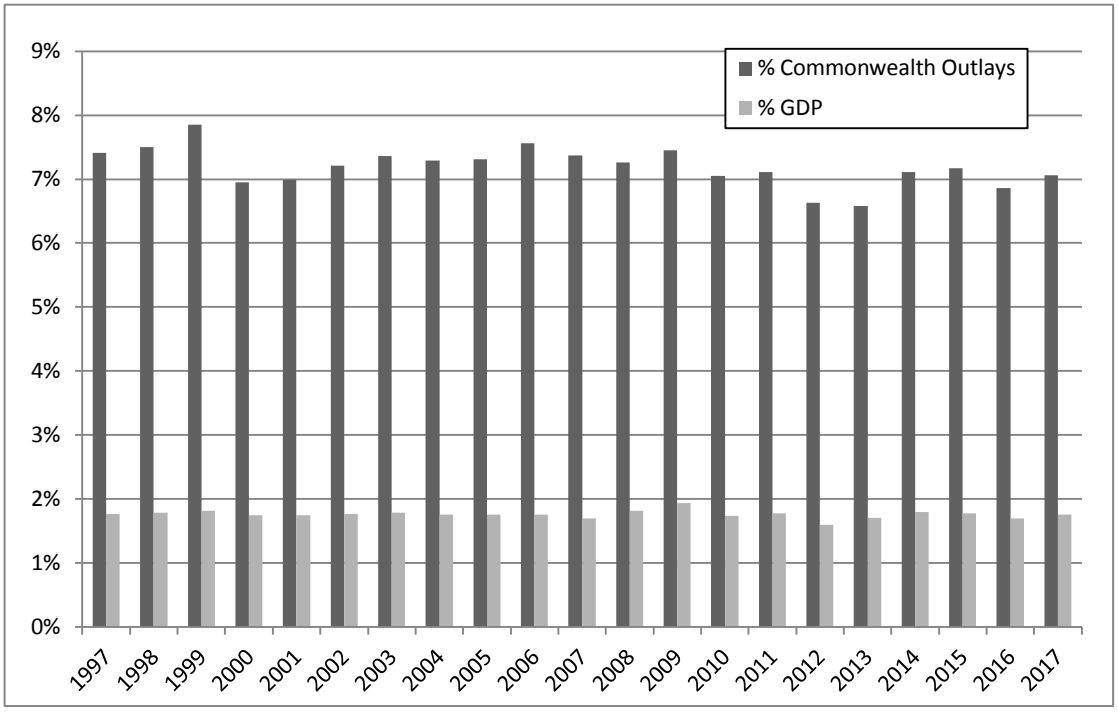
Defence spending as a percentage of total Commonwealth payments is shown in Table 2.2.3. On current plans, Defence's share of payments will rise slowly over the forward estimates period. Figure 2.2.2 graphs the percentage GDP and share of Commonwealth payments from 1997 to 2017.

Table 2.2.3: ASPI Net Defence Funding as a percentage of Commonwealth payments

00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18
6.96	6.99	7.21	7.36	7.29	7.31	7.56	7.37	7.26	7.45	7.05	7.11	6.65	6.58	7.11	7.17	6.86	7.06

Source: Analysis of data from 2014-15 Budget Overview, 2014-15 PBS and earlier DAR

Figure 2.2.2: Net Defence Funding as a Percentage of payments and GDP



Source: Analysis of data from Budget Overview, 2014-15 PBS and earlier, DAR 2005 = 2005-06 etc.

Changes since the last budget

Since the last budget, measure and adjustments have been undertaken that provide context for this year's budget. Table 2.2.4 shows the key items from the 2013-14 Portfolio Additional Estimates Statement (PAES) [Table 7, p.15].

Table 2.2.4: Key measures and adjustments from the 2013-14 PAES (million $)

	13-14	14-15	15-16	16-17	4 year total
Defence Budget Rephasing	359.4	304.0	-89.0	-1,000.4	-426.0
Operational supplementation	127.6	4.2			131.8
Free ADF Family Health Care*	-	-	-	-	$225.4
PNG Regional Resettlement	5.6				5.6
Efficiency Dividend (temp increase)		-28.3	-67.6	-106.8	-202.7
Reform Savings	-11.9	-15.4	-20.5	-13.1	-60.9
Foreign exchange movements	381.7	428.3	480.8	528.2	1819.0
Carried Forward Appropriation	67.3				67.3
DMO appropriation adjustment	35.6	39.4	41.1	43.5	159.6
TOTAL	**965.1**	**732.2**	**344.8**	**-548.6**	**1,493.5**

*Source: 2013-14 PAES. Note: Ten-year totals were not disclosed. *Absorbed measure.*

Defence Budget Rephasing

A total of $1.1 billion was removed from 2015-16 and 2016-17 allowing $663.4 million to be brought forward to 2013-14 and 2014-15. It's likely that the money was shifted to address near-term budget pressures, most especially in the capital investment program. The residual -$426 million has presumably been removed from the defence funding envelope.

Operational supplementation

Defence is funded on a no-loss/no-win basis for the net additional cost of operational deployments. Additional funding of $131.8 million over two years was provided for operations in Afghanistan and Middle East Area of Operations (MEAO) as well as for Operation Sovereign Borders.

Free basic health care to all Australian Defence Force family members

According to the budget papers, the 'Government will provide $225.4 million over four years for a national Australian Defence Force Family Health program commencing in January 2014. Families of permanent Australian Defence Force (ADF) and continuous full-time service members within Australia will be eligible to be reimbursed for out-of-pocket expenses for Medicare-recognised general practice services. Additionally, each ADF dependant will be able to claim up to $400 per year for allied health services, such as physiotherapy, psychology, dentistry and podiatry'. Defence will absorb the cost of this measure.

PNG Regional Resettlement

This measure relates to the cost of initiatives to deter people smuggling.

Efficiency Dividend—Temporary Increase

This represents yet another (but, as it turn out, by no means the last) increase to the efficiency dividend imposed on 'non-operational' components of Defence.

Reform Savings

These savings relate to reforms to APS management and efficient procurement of agency software, presumably a whole-of-government initiative.

Foreign Exchange Movements

Defence is funded on a no-win/no-loss basis for foreign exchange movements. Depending on how the Australian dollar moves relative to currencies that Defence plans to make purchases in, adjustments are made to maintain the buying power of the Defence budget. As a result of depreciation in the value of the Australian dollar in 2013-14, Defence received $381.7 million in 2013-14 and $1,819 million over the budget and forward estimates.

DMO appropriation adjustment and Carried Forward Appropriation

Due to functions and staff movements between Defence and DMO, DMO received $36.5 million in the budget year and $159.6 million across the Budget and Forward Estimates. The Carried Forward Appropriation relates to the drawdown of previous years' appropriations that have been carried forward.

2.3: Funding from Government [PBS Section 1.3]

The 2014-15 Budget Measures and Adjustments [PBS p. 17 – 18]

Each year, changes to the Defence budget are set out in the PBS. Usually the changes fall into three categories: budget measures, savings measures and budget adjustments. The distinction between the three is variable, with identical items classified differently from one year to the next. There are also so-called 'absorbed measures', these are unfunded initiatives that must be funded from within existing Defence resources. Inevitably, this means that either other activities have to be foregone or efficiency savings created. For ease of reference, the individual measures and adjustments have been detailed in Table 2.3.1.

The budget initiatives in detail

In the past, the PBS contained detailed explanations of the various measures. However, the PBS has been silent on such matters for several years now. Fortunately, further information is available in Treasury's Budget Paper Number 2 regarding Defence measures. This information is reproduced below—often verbatim—along with supporting data where available. Regrettably, and as was the case last year, the impact of measures and adjustments beyond the forward estimates is no longer disclosed.

See Chapter 6 of this Brief for more on the cost and composition of ADF deployments.

Table 2.3.1: 2014-15 Budget Measures and Adjustments (million $)

	2013-14	2014-15	2015-16	2016-17	2017-18	Total
Measures						
Middle East Area of Operations		128.1	-33.7	18.5	-	112.9
Coastal Surveillance—Op Resolute		59.7	0.6			60.3
ADF Support to G20 Summit*		-	-	-	-	-
Malaysia Airlines Flight MH370 - search	25.0	3.0	-1.0			28.0
Defence funding profile	500.0	300.0	550.0	150.0	-2,020.0	-520.0
ADF Gap Year re-establishment		18.3	37.5	57.5	78.5	191.8
Property Sales Retained	45.5	37.9	45.2	13.5	14.1	156.2
Superannuation Indexation		-2.3	-4.3	-8.5	-12.0	-27.1
New Military Superannuation				-87.6	-143.1	-230.7
US Force Posture Initiative*		-	-	-	-	-
Savings and efficiencies		-	-	-	-	-
Communications and Public Affairs		-	-	-	-	-
Efficiency Dividend 0.25% increase		-7.4	-16 5	-24.8	-27.0	-75.8
Adjustments						
DMO direct appropriation adjustment		29.4	32.1	33.2	34.6	129.4
Housing disposal adjustment		-	-	-	-	-
Foreign Exchange adjustment	91.1	223.9	125.7	117.4	162.6	720.7
Total Variation to Funding	**663.9**	**790.5**	**736.6**	**269.1**	**-1,912.2**	**547.8**

Source: 2014-15 PBS and Budget Paper #2. Numbers may not add up due to rounding. *Absorbed measure.

Measures

Middle East Area of Operations — continuation

The Government will provide $116.2 million over three years for the net additional cost (including remediation costs) of continuing Australia's military contribution to international stabilisation and counter-terrorism efforts in the MEAO in 2014-15. The cost will be reduced by the recovery of $3.3 million from other Coalition forces for logistic support provided by the Australian Defence Force (ADF).

Operation Resolute — extension

The Government will provide $60.3 million over two years for the net additional cost of continuing Operation Resolute until June 2015. Op Resolute is the ADF contribution to the whole-of-government effort to protect Australia's borders and offshore maritime interests.

Australian Defence Force Support to the G20 Summit

The Government will provide $8.0 million in 2014-15 for the Australian Defence Force to provide security support to the G20 Summit. The cost of this measure will be met by Defence.

Malaysia Airlines flight MH370 — search

The Government will provide up to $89.9 million over two years from 2013-14—including $28 million for Defence—as part of Australia's contribution to the search for Malaysia Airlines flight MH370.

Defence funding profile

The Government will bring forward $1.5 billion from 2017-18 and distribute it over the period 2013-14 to 2016-17. Funding of the Approved Major Capital Investment Programme and important capabilities to support networked operations will be accelerated to reduce the risk of capability gaps.

Bringing forward $500 million to 2013-14 will help fund priority foreign military asset purchases, including the Growler electronic attack aircraft, the Romeo Naval anti-submarine combat helicopter and the upgrade to the Naval Standard Missile-2 long-range anti-aircraft missile. The funds brought forward to the period 2014-15 to 2016-17 inclusive will address underinvestment in a range of important capabilities.

This measure also includes a movement of funds beyond the forward estimates period (2019-20 and 2020-21) to smooth the defence funding profile and put defence spending back on an achievable growth path towards the Government's objective of defence funding of 2% as a share of GDP.

Australian Defence Force Gap Year Programme — re-establishment

The Government will provide $191.8 million over four years to re-establish the Australian Defence Force Gap Year Programme. Australians aged 17 to 24 years who have completed year 12 or equivalent studies will be eligible to apply for the Gap Year, with the first intake of the programme to occur in January 2015.

Defence real estate sales — direction of proceeds towards Defence projects
The Government will direct the net proceeds from the sale of Defence real estate to approved Defence projects. Defence will receive additional funding, estimated to be $156.2 million over five years, over and above the costs of preparing the land and buildings for sale.

Defence Forces Retirement Benefits and Defence Force Retirement and Death Benefits superannuation payments — indexation
The Government will allocate $1.4 billion over four years as a result of improvements to the indexation of payments made under the Defence Forces Retirement Benefits (DFRB) and Defence Force Retirement and Death Benefits (DFRDB) superannuation schemes. The impact of this measure is $135.1 million in underlying cash terms over the forward estimates.

From 1 July 2014, DFRB and DFRDB superannuation scheme members aged 55 and over will have their superannuation benefits indexed by the better of the Consumer Price Index and the Pensioner and Beneficiary Living Cost Index, with reference also to a benchmark level of Male Total Average Weekly Earnings.

Military Superannuation — establish new accumulation arrangements
From 1 July 2016, the Government will establish a modern fully funded, accumulation superannuation scheme for new members of the Australian Defence Force (ADF). The existing Military Superannuation and Benefits Scheme (MSBS) will be closed to new members from this date.

United States Force Posture Initiative
The Government will provide funding for the up-front costs of infrastructure development for the United States Force Posture Initiatives at Robertson Barracks and RAAF Base Darwin in the Northern Territory. The cost of this measure will be absorbed by Defence. The financial arrangements with the United States are still under negotiation. The cost of the infrastructure development is not for publication due to the commercial-in-confidence nature of the tender processes involved.

Savings and efficiencies
The Government will achieve savings of $1.2 billion over four years in the Defence portfolio through initiatives to increase efficiency, reduce spending in lower priority areas, and defer lower priority projects. All savings from this measure will be reinvested in Defence capability, resulting in no impact on overall Defence funding.

The major components of this measure are:

- a reduction in Defence civilian staff numbers, resulting in 1,200 fewer Australian Public Service staff and 300 fewer service provider staff by 2017-18, saving $606 million over four years
- a deferral of Phase 3 of the Single Living Environment and Accommodation Precinct project, saving $300 million;
- a reduction in Smart Sustainment initiatives, saving $63.6 million over four years

- a reduction in the use and support of the Australian Defence Force's fleet of General Service B-Vehicles, saving $60 million over four years.

Apart from the APS and contractor staff reductions, the details given in Budget Paper 2 (reproduced above) are difficult to reconcile with the description in the Budget night Ministerial press release of $1.2 billion of 'back-office' savings. There is nothing back-office about B-vehicles, military accommodation or capability sustainment.

Moreover, although we are told that service provider numbers will decline by 300 over four years, the number of contractors employed by Defence actually increases out to 2017-18 (see Table 9, page 24). In contrast, the reduction of 1,200 civilians over four years appears to understate the difference between previous workforce estimates and the latest.

Communications and Public Affairs Functions — targeted savings

The Government will achieve savings of $43.3 million over four years by moving to more efficient practices for public affairs and internal communications within Australian Government agencies. Savings from the Department of Defence of $6.4 million will be reinvested in Defence capability. (This measure may be embedded within the Savings and Efficiencies measure above).

Efficiency Dividend — a further temporary increase of 0.25 per cent

The Government will achieve savings of $569.0 million over four years (including $25.0 million in capital savings) by increasing the annual Efficiency Dividend by 0.25 per cent for 2014-15, 2015-16 and 2016-17, with savings to be targeted in areas such as reduced advertising, consultancy and travel costs and deregulation efficiencies.

Adjustments

DMO direct appropriation adjustment

Due to functions and staff movements between Defence and DMO, DMO will receive $29.4 million in the budget year and $129.4 million across the Budget and Forward Estimates.

Foreign Exchange adjustment

Defence is funded on a no-win/no-loss basis for foreign exchange movements. Depending on how the Australian dollar moves relative to currencies that Defence plans to make purchases in, adjustments are made to maintain the buying power of the Defence budget. As a result of depreciation in the value of the Australian dollar in 2013-14, Defence received $91.1 million in 2013-14 and $629.6 million over the budget and forward estimates.

So what happened?

This year's Defence budget is easy to understand. Three things have happened:

- Funding has been reprogrammed out of 2017-18 to address near-term funding pressures in the capital investment program and provide a smoother and more achievable funding profile.

- Despite the government's promise of 'no more cuts', $75 million has been taken from defence funding through an increase to the Public Service wide efficiency dividend also announced in the election campaign.

- Savings and efficiencies of $1.2 billion are planned with the money to be reinvested in defence capability. Some of the initiatives are related to more efficient use of resources, others are simple cuts and deferrals of low-priority activities without any improvement to efficiency.

2.4: Capital Investment Program [PBS Section 1.4]

Information on the Capital Budget is spread across several areas of the PBS. The Capital Budget represents Defence's plans for capital investment in new equipment, upgrades, facilities and other non-military capital items. It's formally described in accounting terms in the Capital Budget Statement in Table 57 on page 97 of the PBS, although that is not very revealing.

Capital Investment Program [PBS p.19]

The Capital Investment Program is detailed in Table 5 page 19 of the PBS, which we have reproduced in part in Table 2.4.1. Unfortunately, the projected result for 2013-14 has not been included in this year's PBS so we have been forced to use the revised estimate from the 2013-14 PAES. Similarly, because the Defence Annual Report no longer reports on the capital investment program, we've had to use the revised estimate from the 2012-13 PAES for that year.

Table 2.4.1: The Capital Investment Program (million $)

	06-07 actual	07-08 actual	08-09 actual	09-10 actual	10-11 actual	11-12 actual	12-13 proj.	13-14 proj.	14-15 budget	15-16 est.	16-17 est.	17-18 est.
Unapproved Major Capital Investment (DCP)	-	-	-	-	-	-	30	14	671.5	1,579	3,524	3,048
Approved Major Capital Investment	4,019	4,030	3,943	5,150	4,838	4,208	3,327	3,544	5,389	5,173	3,823	4,489
Subtotal	**4,019**	**4,030**	**3,943**	**5,150**	**4,838**	**4,208**	**3,357**	**3,558**	**6,061**	**6,752**	**7,347**	**7,537**
Capital Facilities Approved & Unapproved	653	570	963	1,504	1,211	997	1,019	1,222	1,190	516	753	1,179
Other Capital	925	829	742	626	883	739	276	1,482	1,335	1,387	155	997
Total Capital Investment Program	**5,598**	**5,429**	**5,648**	**7,280**	**6,932**	**5,944**	**4,652**	**6,262**	**8,585**	**8,655**	**8,255**	**9,713**

Source: 2012-13 PAES, 2013-14 PBS and various DAR. The AMCIP figure for 2011-12 does not take into account the additional $825 million booked in 2010-11 by DMO and paid for by Defence in 2011-12. Where possible, large shifts due to accumulation and drawdown of the DMO special account have been accounted for.

There are four components to the Capital Investment Program:

Unapproved Major Capital Investment Program or Defence Capability Plan (DCP): This represents Major Capital Investment projects that have not yet received second pass approval from government. Major Capital Investment projects are generally of more than $20 million value and predominantly involve the purchase of military equipment, (previously called 'Pink Book' projects). The preparation of these projects for approval is the responsibility of the Chief of the Capability Development Group. Once approved, projects generally pass to the DMO for delivery.

Approved Major Capital Investment Program: Projects already approved by government and under way, previously called the 'White Book'. Once approved, projects generally pass to the DMO for delivery.

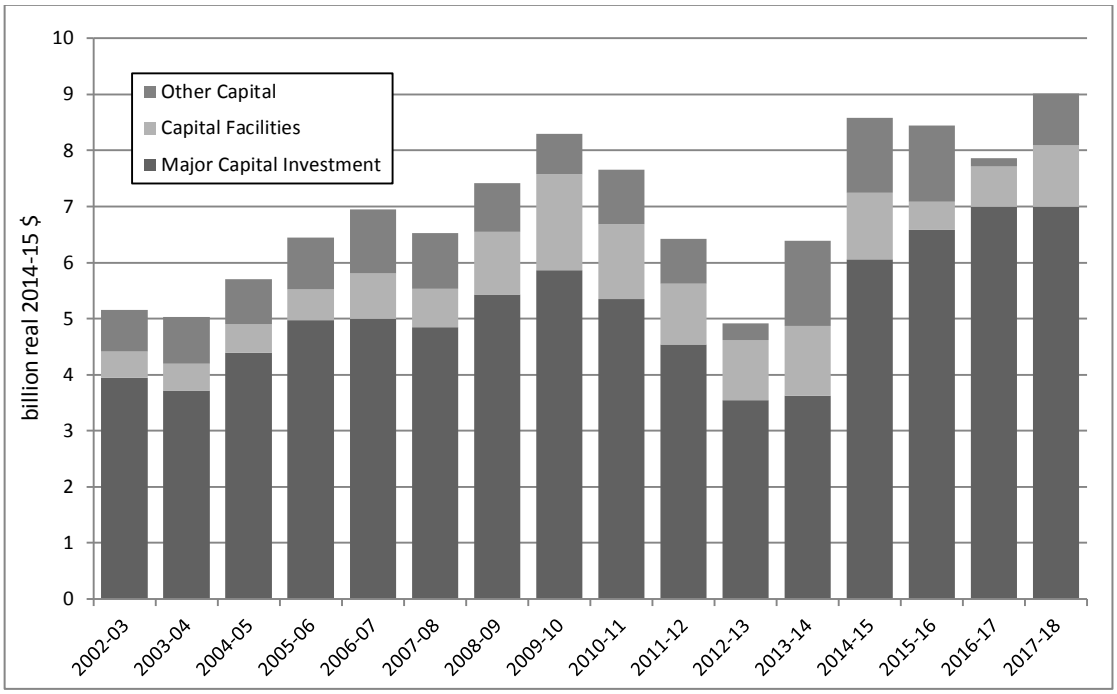
Capital Facilities: Approved and Unapproved Capital Facilities Projects, including everything from new barracks to upgrades of existing facilities. These projects are the responsibility of the Infrastructure Division in the Defence Support Group.

Other Capital: including Minor Capital Investment (projects costing less than $20 million), repairable items, non-capital facilities, plant and equipment, and software and intangibles.

What are the trends in the Capital Investment Program?

Recent actual and projected real spending in the Capital Investment Program is shown in Figure 2.4.1 in terms of 2013-14 dollars. Note that the figures for 2012-13 are uncertain because no official figures have been released for the anticipated outcome for that year. The reduction in funding in recent years is a hangover from the attempt to get back to surplus in 2012-13. Further discussion of the capital investment program appears in Chapter 3.

Figure 2.4.1: Recent and planned trends in the Capital Investment Program



Source: 2013-14 PBS and various DAR. The AMCIP figure for 2011-12 does not take account of an additional $825 million booked in 2010-11 by DMO and paid for by Defence in 2011-12.

Unapproved Major Capital Investment Program [PBS page 117]

The PBS again contains a list of DCP projects planned for first (5) and second pass (12) approval in the forthcoming year. The Future Submarine Program (SEA 1000) is also planned for government consideration during 2014-15 without seeking formal first or second pass.

Approved Major Capital Investment Program [PBS page 146]

The approved Capital Investment Program is mainly, but not exclusively, the responsibility of DMO. As a result, most of the information on approved projects can be found in the DMO section of the PBS, including details of the top 30 projects. We examine the Capital Investment Program more closely in Chapter 2.7 of this Brief.

Major Capital Facilities Program [PBS pp.119–129]

The PBS lists 55 approved Major Capital Facilities projects (worth $15 million each or more) at various locations with a total value $3.7 billion. In the past, medium projects of between $25,000 and $15 million were also listed but have been omitted this year. In the 2014-15 Budget the government has foreshadowed 8 new major capital works projects for parliamentary consideration and 6 medium capital works projects. These are listed in Table 75 of the PBS. Expenditure on facilities projects in 2014-15 is planned at $1.19 billion.

Table 75 of the PBS lists the approved major facilities projects. The largest such projects are the Enhanced Land Force Phase 2 facilities at various locations ($1,458 million), Defence Logistics Transformation Program ($753 million), Moorebank Units Relocation ($353 million), MH-60R facilities ($189 million), RAAF Amberley Redevelopment Stage 3 ($332 million), Albatross Redevelopment Stage 3 ($192 million), and the redevelopment of East Sale ($186 million).

Other Capital Purchases

Other capital purchases include Minor Capital Investment, Repairable Items and Other Plant and Equipment. Defence plans to spend $1,355million on other capital purchases in 2014-15. The year-to-year volatility in this category is difficult to understand.

Retained Capital Receipts [PBS page 20]

The Capital Budget is funded in part through the proceeds from sales of property, plant and equipment and other capital receipts (see Table 7 on page 20 of the PBS). On a year by year basis some or all of this money is returned to the government through a capital withdrawal. This is taken into account in determining the appropriations to Defence. Table 2.4.2 shows recently planned and achieved assets sales (including both property and other assets.

Capability Sustainment Program [PBS page 20]

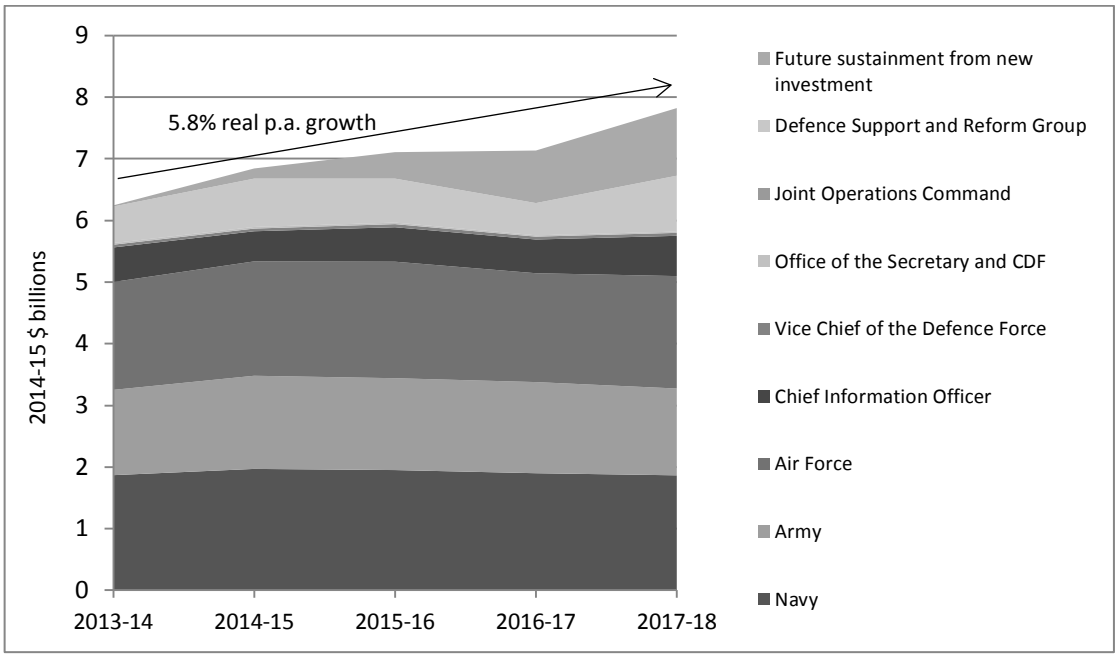
Since 2013-14 the PBS has listed the Capability Sustainment Program by group. This year, the figures appear in Table 6. As data accumulates, an interesting time series will become available. Figure 2.4.2 plots the five years of data that is available. Note that sustainment costs are rising in real terms by 5.8% p.a. compounding.

Table 2.4.2: Proceeds from the sale of assets ($ million)

	Budgeted	Achieved	Shortfall		Budgeted	Achieved	Shortfall
pre 2000	–	77	–	**2010-11**	156	138	18
2000–01	820	87	733	**2011-12**	118	134	-16
2001–02	1023	199	824	**2012-13**	127	undisclosed	
2002–03	700	632	68	**2013-14**	102	undisclosed	
2003–04	306	184	122	**2014-15**	73		
2004-05	231	143	88	**2015-16**	79		
2005-06	95	108	-13	**2016-17**	23		
2006-07	38	134	-96	**2017-18**	61		
2007-08	99	65	-34				
2008-09	285	5	280				
2009-10	287	61	226				

Source: DAR, 2014-15 PBS and 2013-14 PAES

Figure 2.4.2: The Capability Sustainment Program



Source: 2014-15 PBS and 2013-14 PAES

2.5: People

Overview

Over the past fifteen years, Defence's military and civilian workforces have been on a roller coaster ride. There have been periods of unplanned and planned growth and periods of unplanned and planned reductions in both workforces. Over the same period, the long-term target strength of the ADF has slowly but surely grown from around 50,000 to around 59,600, while the long-term target size of the civilian workforce grew to a peak in excess of 22,000 around 2009 before being repeatedly cut to just over 18,100 today.

Since 2000, there have been a range of initiatives to improve the management of personnel from a business and planning perspective, and to enhance the development, care, recruitment and retention of personnel. The most substantial changes arose in late 2006, when the then-government allocated another $1 billion for recruitment and retention over ten years, with a further $2.1 billion made available the next year. The 2006 and 2007 funding initiatives were a response to unplanned reductions in the preceding years. In the late 2000s, ADF numbers grew more quickly than planned (after the GFC) but have since fallen three years in a row despite plans to grow the force.

At present, Defence is trying to once again turn around declining permanent ADF numbers in order to build the force to target levels. At the same time, the change of government has seen the target strength of the ADF grow by 570 positions above the level set out in the 2013 Defence White Paper. It's curious that the new government has not taken credit for this boost to planned numbers, most of which are planned for Army. Over the next four years, permanent ADF numbers are planned to increase by 3,200 above 2013-14 levels.

On the civilian side, numbers are being driven down by wave after wave of efficiency measures, the latest of which is a reduction of 1,200 positions over the next four years. Numbers have already fallen substantially but the yet-to-be implemented impact of the successive cuts is a further reduction of 2,400 between 2013-14 and 2017-18.

How big is the workforce?

According to the PBS, in 2014–15 Defence will be funded to maintain an average of:

- 58,839 full-time military personnel
- 20,092 APS civilians (including 4,777 in DMO)
- 20,500 Reservists

In addition, there will be 432 Professional Service Providers or 'contractors', including 48 in DMO.

Over the next four years, military numbers are planned to rise to 59,574, beginning with an additional 2,444 people next year. Reserve numbers are planned to grow to around 21,300 over four years. Civilian APS personnel numbers will fall by around 419 in 2014-15 compared with 2013-14. Historical and planned workforce numbers are detail in Table 2.5.1

Table 2.5.1: Workforce summary for Defence plus DMO (average funded strength)

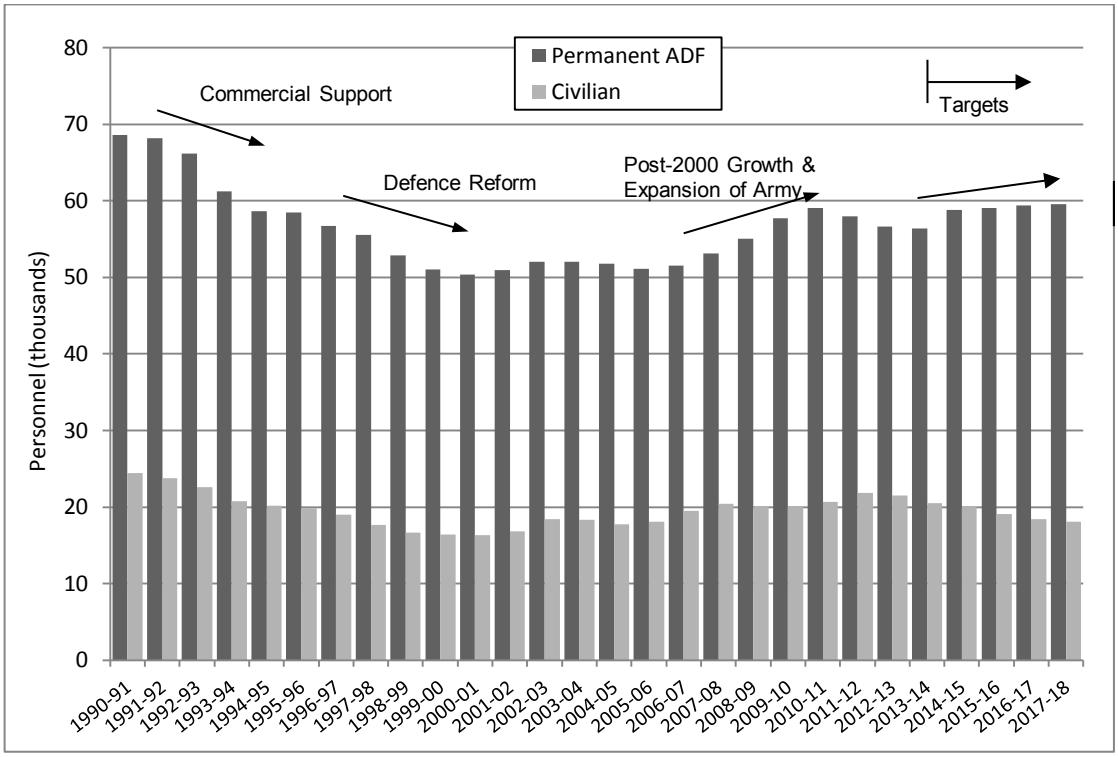
	2001-02 actual	2002–03 actual	2003–04 actual	2004–05 actual	2005–06 actual	2006–07 actual	2007–08 actual	2008–09 actual	2009–10 actual	2010–11 actual	2011-12 actual	2012-13 actual	2013-14 proj.	2014-15 budget	2015-16 est.	2016-17 est.	2017-18 est.
Navy	12,598	12,847	13,133	13,089	12,767	12,690	12,935	13,182	13,828	14,207	14,054	13,760	13,839	14,318	14,385	14,374	14,422
Army	25,012	25,587	25,446	25,356	25,241	25,525	26,611	27,833	29,339	30,253	29,697	28,928	28,580	30,383	30,464	30,768	31,027
Air Force	13,322	13,646	13,455	13,368	13,143	13,289	13,621	14,066	14,530	14,624	14,243	13,919	13,976	14,138	14,216	14,235	14,125
TOTAL	**50,932**	**52,080**	**52,034**	**51,813**	**51,151**	**51,504**	**53,167**	**55,081**	**57,697**	**59,084**	**57,994**	**56,607**	**56,395**	**58,839**	**59,065**	**59,377**	**59,574**
Active Reserve	18,868	19,620	20,488	19,275	19,464	19,562	20,340	20,277	21,248	21,339	22,072	20,708	**19,650**	**19,950**	**20,185**	**20,430**	**20,605**
High Readiness	-	-	-	-	-	-	-	-	-	-	-	-	**550**	**550**	**590**	**630**	**670**
Total Reserve	**18,868**	**19,620**	**20,488**	**19,275**	**19,464**	**19,562**	**20,340**	**20,277**	**21,248**	**21,339**	**22,072**	**20,708**	**20,200**	**20,500**	**20,775**	**21,060**	**21,275**
Civilians																	
Defence	16,819	18,385	18,303	13,390	13,577	14,516	15,087	14,489	14,532	15,115	15,829	15,786	15,268	14,883	13,962	13,314	13,007
DMO	-	-	-	4,363	4,502	4,951	5,304	5,552	5,526	5,533	5,989	5,748	5,243	5,209	5,106	5,141	5,098
Total Civilian	**16,819**	**18,385**	**18,303**	**17,753**	**18,079**	**19,467**	**20,391**	**20,041**	**20,058**	**20,648**	**21,818**	**21,534**	**20,511**	**20,092**	**19,068**	**18,455**	**18,105**
PSP																	
Defence	-	2,311	1,880	1,913	1,277	810	620	1,008	700	581	467	358	346	445	447	453	453
DMO	-	-	-	-	374	298	181	176	120	24	45	33	22	48	46	46	44
Total PSP	-	2,311	1,880	1,913	1,651	1,099	801	1,184	820	605	512	391	**368**	**493**	**493**	499	**497**
PSP & Civilian	-	**20,696**	**20,183**	**19,666**	**19,730**	**20,575**	**21,192**	**21,225**	**20,878**	**21,253**	**22,330**	**21,925**	**20,879**	**20,585**	**19,561**	**18,954**	**18,602**

SOURCE: DAR, 2014-15 PBS.

Historical background

During the 1990s ADF numbers dropped from around 70,000 to 50,000 permanent personnel, as shown in Figure 2.5.1.

Figure 2.5.1 Historical and Planned Defence Workforce



Source: Various DAR, 2001-02 Defence Budget Brief and 2014-15 PBS

The bulk of these reductions were due to outsourcing under the Commercial Support and Defence Reform programs (although around 5,600 permanent ADF positions had already been transferred to the Reserves by the 1991 Force Structure Review). In fact, the initial goal of the Defence Reform Program (DRP) was to reduce the strength of the ADF to 43,500 but this was soon revised up to 50,000, thereby arresting the decline. This was done by re-directing DRP savings to buy-back the ADF positions, the goal being to redirect personnel from support areas to the combat force—though there is little evidence of this occurring.

The 2000 White Paper then set permanent ADF numbers on a growth path towards 53,000 to 54,000 personnel. Subsequent budgets added additional personnel for a range of initiatives including, most especially, the expansion of the Army. By 2009 the target had grown to around 57,000.

The 2009 Defence White Paper revised the full-time ADF target up to approximately 57,800 and the civilian workforce up to 21,900 over the decade. Subsequent reductions in planned savings under the Strategic Reform Program saw the targets grow to around 59,000 and 23,000 for the military and civilian workforces respectively. The 2013 Defence White Paper said that permanent ADF would be maintained at around 59,000 and that civilian number will fall by 1,000 to around 20,500, effectively the targets existing prior at that time. We now turn to examine the civilian and military workforces in more detail, including recent developments.

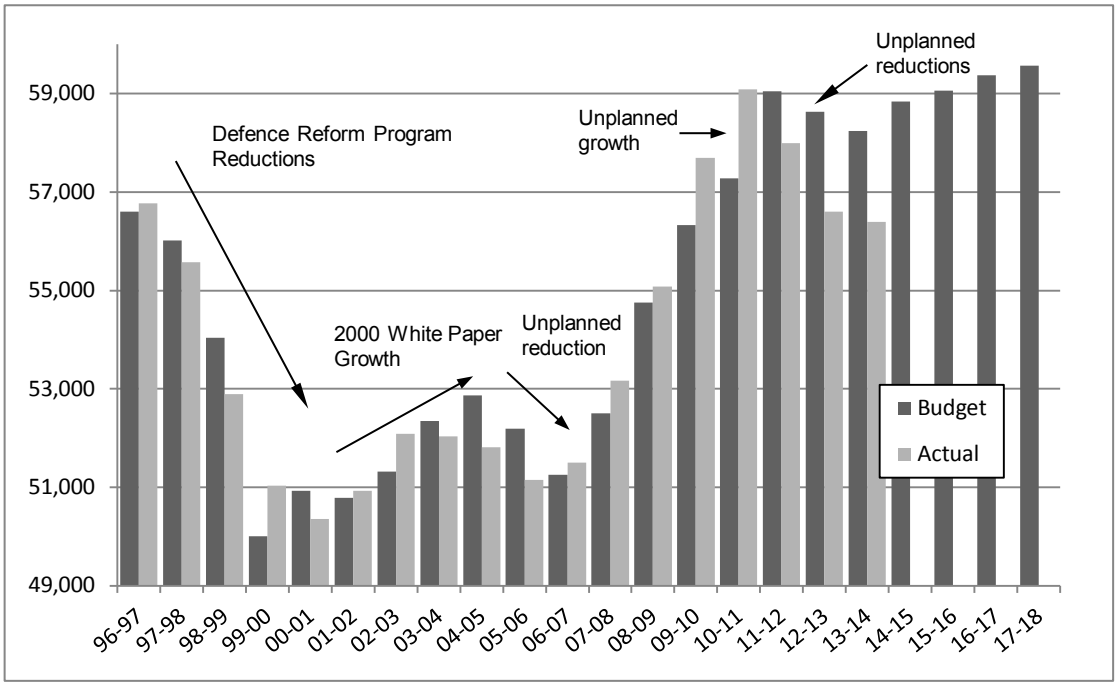
Permanent ADF Numbers

The changing size of the permanent ADF is captured in Figure 2.5.2. In the initial years following the 2000 White Paper, permanent ADF numbers grew steadily until 2003-04 when poor recruiting outcomes saw numbers fall for three years in a row—notwithstanding budgeting for growth in each instance. Then, in 2006-07, numbers began to rise to the extent that budget estimates were exceeded three years in a row. All signs being that the revamp of recruiting and retention policy (and a lot of extra money) slowly but steadily turned around the personnel situation.

Then, for two years commencing in 2009-10 military numbers grew much more quickly than planned as a result of better than expected recruitment and retention. In 2009-10 military personnel exceeded planned levels by 1,372. To redress this unplanned growth, the permanent ADF was supposed to *decrease* by around 400 people in 2010-11. Instead, the ADF grew by a further 1,387 positions, exceeding planned levels by 1,808. During 2011-12, action was taken to get military numbers back to planned levels with more success than planned so that actual numbers fell to around 1,000 below what was planned. The trend continued over the next two years with numbers falling 2,000 and 1,800 below target in 2012-13 and 2013-14 respectively.

According to the PBS, the unplanned shrinkage of the permanent force reflects several factors including reduced recruiting targets and higher than anticipated separations. In the case of Navy, recruiting targets were reduced due to training pipeline constraints. Defence says that it has developed a Defence Employment Offer framework to stem the separation rate and that Navy has addressed many of the training pipeline issues. Recruiting targets have been increased for Navy and Army with the aim of a 59,600 strong permanent force.

Figure 2.5.2 Permanent ADF personnel: 1996-97 to 2017-18 (average funded strength)



Source: DAR, 2001-02 Defence Budget Brief, 2014-15 PBS

Recruitment and retention

The annual change in ADF strength is the difference between the numbers of people recruited into and separated from the force (historically around 5,000 in each case). Since the planned change in strength is usually no more than 1,000, the outcome is finely balanced. With this in mind, we turn now to examine ADF recruitment and separations.

Recruitment

Table 2.5.2 shows the percentages of recruitment targets that have been met over the last fifteen years. Following solid improvements earlier this decade, which saw the rate grow from 76% to 93% in 2001-02, performance dropped back to the mid-80% in 2002-03 and 2003-04 before deteriorating to 80% in 2004-05 and then recovering to 84% for the next two years. In 2007-08 and 2008-09 the result fell to around a 15-year low before recovering strongly in 2009-10 and 2010-11. The result for 2011-12 is good by historical precedents.

Table 2.5.2: Percentage of recruitment targets met (per cent)

	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Navy	98	92	98	76	57	74	85	84	86	73	72	78	73	72	91	87	88	
Army	99	98	94	78.5	83	79	100	79	84	81	98	86	76	76	90	90	87	
Air Force	86	93	101	90.5	83	88	87	94	90	91	88	86	85	86	92	93	86	
ADF	**96**	**94**	**97**	**80**	**76**	**80**	**93**	**84**	**86**	**80**	**84**	**84**	**77**	**76**	**91**	**89**	**87**	

Source: Various DAR and Defence submission to the FAD&T Committee inquiry into ADF recruitment and retention, May 2001

It is important to note that recruitment results vary from Service to Service, and that within each Service skilled personnel (like technicians and tradespeople) are particularly hard to recruit. In recent times, this has no doubt reflected the buoyant labour market and the national skilled labour shortage that Australia has experienced. As the data shows, Navy has until recently tended to have the most trouble.

Retention

Table 2.5.3 shows the percentages of ADF personnel who separated from full-time military service over the last fifteen years. Some care must be taken with this data because figures for earlier years were impacted by the deliberate reduction in the size of the ADF between 1997 and 2001 under the Defence Reform Program. Still, separation rates from 2001-02 to 2004-05 were better than in 1995-96 before the cuts to personnel commenced. Note that the separation rates for 2009-10 and 2010-11 are the lowest of all the years examined by a fair margin. Unfortunately, this favourable trend did not continue into 2011-12.

To put recent ADF separation rates in context, Figure 2.5.3 plots the separation rate over the past thirty years. The key point to notice is that recent separation rates are commensurate with or better than rates achieved over the past three decades—the last year being an exception. Given that a number of factors have arisen in that time to make long-term ADF service more difficult—growing numbers of employed spouses, greater geographical dispersal of the ADF and the trend in society to shorter-term employment—the fact that the

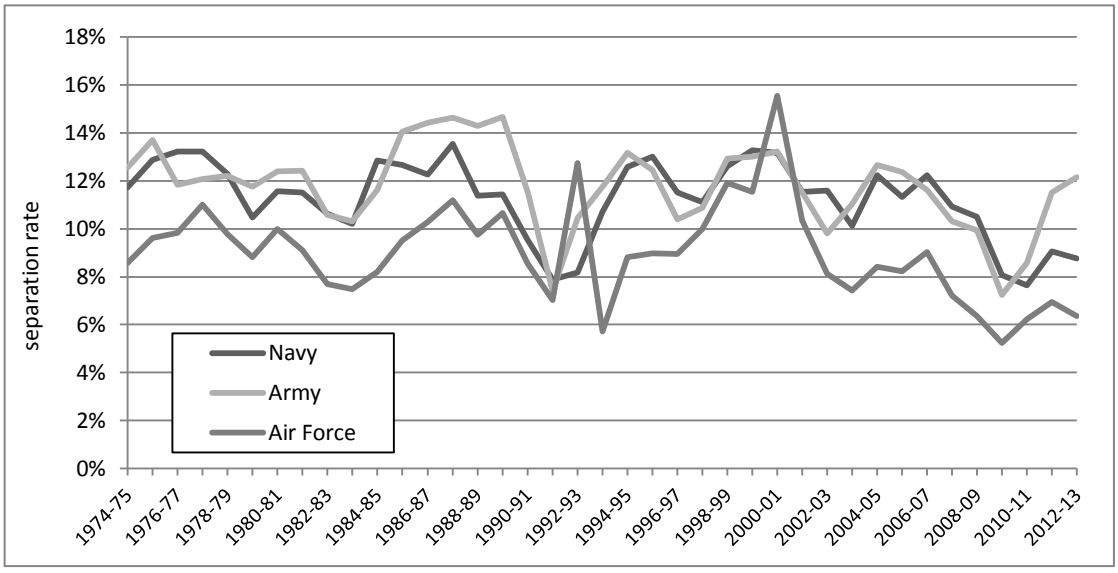
ADF had been able (at least until last year) to keep people on average for longer than in the 1970s is a real achievement.

Table 2.5.3: ADF separation rates %

	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Navy	13.0	11.5	11.1	12.6	13.3	13.2	11.5	11.6	10.1	12.2	11.3	12.2	10.9	10.5	8.1	7.6	9.1	8.8
Army	12.5	10.4	10.9	12.9	13.0	13.2	11.5	9.8	11.0	12.7	12.4	11.6	10.3	9.9	7.2	8.6	11.5	12.2
Air Force	9.0	9.0	10.0	11.9	11.6	15.6	10.4	8.1	7.4	8.4	8.5	9.0	7.2	6.3	5.2	6.2	7.0	6.4
ADF	**11.6**	**10.3**	**10.7**	**12.6**	**12.**	**13.8**	**11.2**	**9.8**	**9.9**	**11.5**	**10.7**	**11.1**	**9.7**	**9.2**	**6.9**	**7.8**	**9.8**	**9.9**

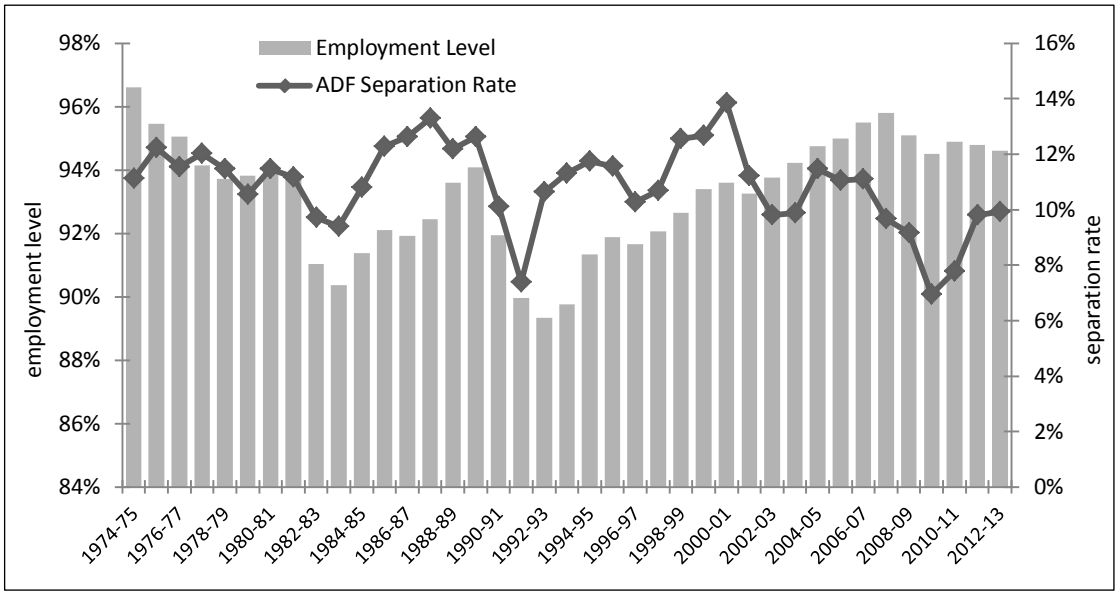
Source: DAR and Defence submission to the FAD&T Committee inquiry into ADF recruitment and retention, May 2001

Figure 2.5.3: Permanent ADF separation rate: 1974-75 to 2012-13



Source: DAR 1974-75 to 2012-13

Figure 2.5.4: Employment and ADF separation rates: 1974-75 to 2012-13



Source: DAR 1974-75 to 2012-13

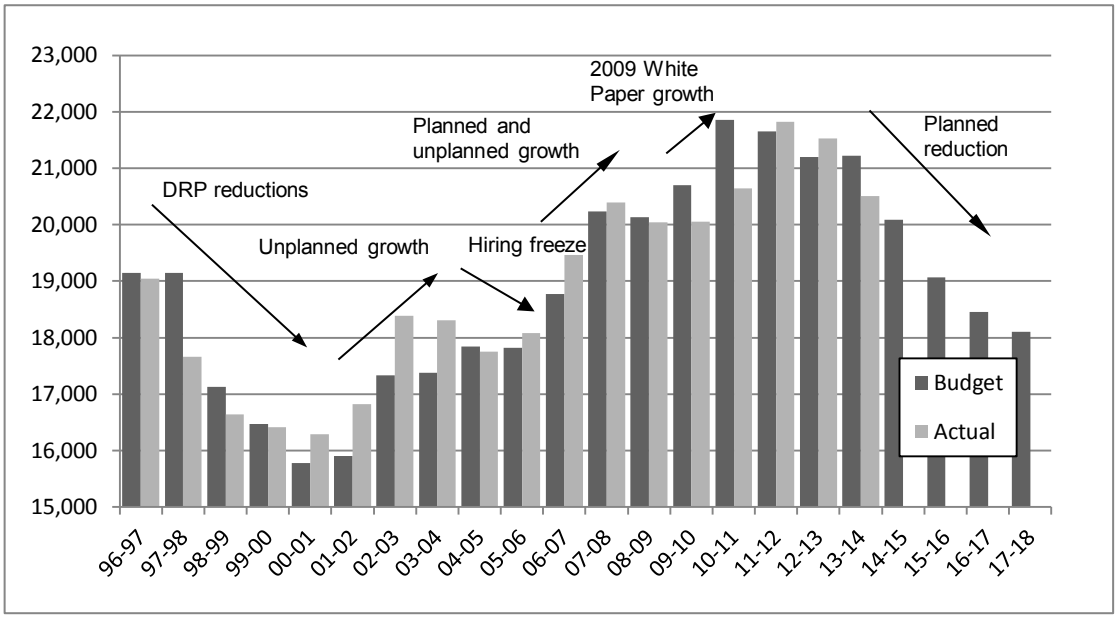
As Figure 2.5.4 shows, the Global Financial Crisis pushed separation rates to historical lows in 2009-10 and 2010-11. Since then, separations have increased but remain below long-term average levels. Note that the correlation between unemployment and separations has been less than clear in recent years.

Questions remain about the recent fall in ADF numbers. Why were recruiting targets set so low in 2011-12, 2012-13 and 2013-14 as to allow the force to fall below budgeted levels by 1,059, 2,029 and 1,840 respectively? Looking at the changes to the separation rate over the period, the shortfalls cannot be readily explained by increased separations—especially given that the separation rate stabilised in 2011-12 and 2012-13. Could it be that numbers were allowed to fall as a response to the tight budgetary constraints imposed on Defence?

Civilian Numbers

The situation with civilian numbers is captured in Figure 2.5.5 which plots budgeted and actual civilian numbers from 1996-07 onwards. Although civilian numbers fell quickly under the Defence Reform Program, they grew back very rapidly in the first two years of the 2000 White Paper implementation—three times more quickly than military numbers grew. What is more, the growth was largely unplanned, with the size of the civilian workforce in 2001-02 exceeding budget estimates by 5.8% and similarly in 2002-03 (6.1% in excess). However, in January 2003 a civilian hiring freeze was imposed within Defence after it became clear that the projected number of civilian personnel would exceed the revised estimate given less than two months earlier. In April 2003, the freeze was lifted but direction was given to maintain civilian numbers at current levels. In the 2003-04 Budget, a programmed reduction plan was set in place to reduce civilian numbers by 1,008, from 18,385 to 17,377.

Figure 2.5.5: Civilian personnel: 1996-97 to 2017-18



Source: Defence Annual Reports, 2001-02 Defence Budget Brief and 2013-14 PBS

However, the actual result for 2003-04 (18,303) was only 82 positions below the previous year's figure due, mainly, to a series of government initiatives but also because of an extra unplanned 349 new civilian positions.

For a while, in 2004-05 and 2005-06, civilian numbers were largely under control resulting in a close alignment of budgeted and actual figures. In 2006-07, civilian personnel numbers were set to rise by 950. Most, but not all, of these positions were related directly to either new government initiatives or the creation of a more efficient workforce. However, the actual result for 2006-07 was an increase of 1,388 personnel, more than 450 above the estimate. Then, in 2007-08, civilian numbers grew by another 1,468, fully 155 above the initial budget estimate. Clearly, whatever constraints were imposed in 2004-05 and 2005-06 were no longer effective.

The plan for 2008-09 was for civilian numbers to fall to around 20,000 and then remain largely static across the forward estimates. However, following the 2009 White Paper civilian personnel numbers were set a target of around 21,900 which was subsequently revised upwards to around 23,000 after Defence abandoned many of the efficiency savings originally planned from the civilian workforce.

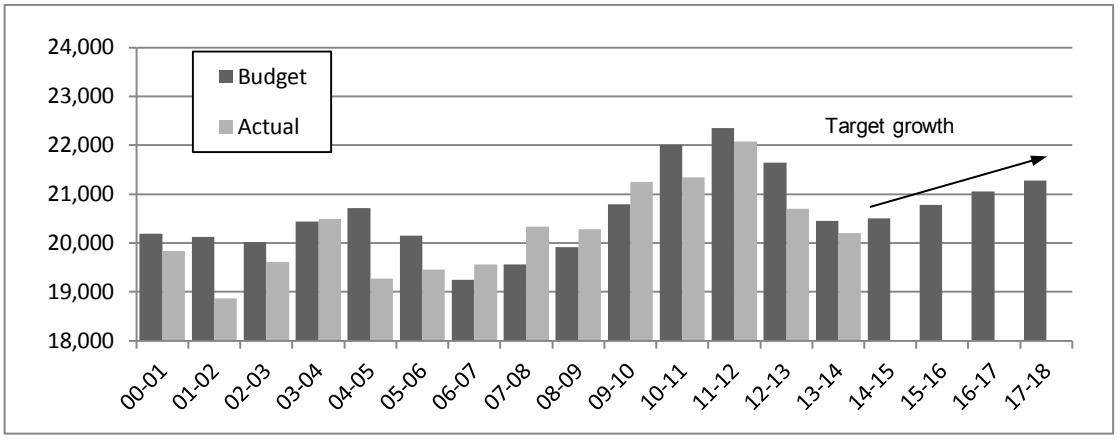
In 2009-10 and 2010-11 civilian numbers failed to grow to planned levels. Specifically, in 2009-10 the number of civilians grew by only 17, fully 645 below the updated budget estimate. Attempts to regain lost progress in 2010-11 largely failed with civilian numbers falling 1,213 below target (though still 590 above the level for the previous year).

Presumably, the shortfalls reflected an overestimate by the 2009 White Paper of the number of civilians needed. Accordingly, budgeted civilian workforce numbers were cut by 1,000 in the 2011-12 budget. In each of 2012 and 2013, civilian numbers were cut by a further 1,000. Despite a notional reduction of 3,000 positions, some of the cuts were against planned growth. This year, a further 1,200 position have been cut. As a result of the successive reductions, APS personnel in Defence will reduce from a peak of 21,818 in 2011-12 to 18,105 in 2017-18 representing an actual reduction of 3,713.

Reserve numbers

Reserve numbers have fallen short for three years in a row, most especially in 2012-13. Consistent with this, and perhaps as a consequence, the long-term target for the size of the Reserve has been reduced from 23,000 to 21,300.

Figure 2.5.6 Active Reserve personnel: 2000-01 to 2017-18



Source: Defence Annual Reports and 2012-13 PBS

What are the long-term targets for the Defence workforce?

The evolution of personnel targets is contained in Tables 2.5.4 and 2.5.5. We cannot account for this year's increase of 600 to the military and decrease of 700 to the civilian targets.

Table 2.5.4: Long-term target (circa 2018) for the Defence civilians & contractors

	Civilian	Contractors	Total
Estimated pre-2009 White Paper Target	**20,000**	**-**	**-**
Baseline (May 2009)			**21,672**
Extra White Paper Positions			2,290
SRP impact			-2,015
2018-19 target strength (May 2009)			**21,937**
Baseline (April 2010)			**21,620**
Extra White Paper Positions			2,290
SRP impact			-1,191
2018-19 target strength (April 2010)			**22,719**
Baseline (April 2011)*			**22,397**
Reduction of 1,000 positions			-1,000
2018-19 target strength (May 2011)			**21,397**
Baseline (July 2011)			**21,397**
Reduction of 1,000 positions			-1,000
2018-19 target strength (May 2012)			**20,397**
2013 Defence White Paper			
Baseline (April 2013)			**21,700**
Reduction of 'around 1,000 positions'			-700
Target strength (May 2013)			**20,000**
Baseline (unknown)			**-**
Reduction of 1,200			-1,200
Target strength (May 2014)			**18,100**

*Source: Budget Papers and the May 2009 and April 2010 SRP Booklets, 2014-15 PBS. *Advice from Defence May 2011.*

Table 2.5.5: Long-term target (circa 2018) for the permanent ADF

	Navy	Army	Air Force	Total
Post-Defence Reform Program Baseline	**13,800**	**23,000**	**13,000**	**50,000**
East Timor Boost 1999		+3,000	+555	+3,555
2000 White Paper Target	**13,800**	**26,000**	**13,555**	**53,555**
Changes made 2000 to 2009	-311	+4,538	+500	+4,721
Estimated pre-2009 White Paper Target	**13,689**	**30,538**	**14,055**	**58,282**
Baseline (May 2009)				**58,648**
Extra White Paper Positions				1,979
SRP impact				-2,813
2018-19 target strength (May 2009)				**57,812**
Baseline (April 2010)				**58,276**
Extra White Paper Positions				1,979
SRP impact				-1,376
2018-19 target strength (April 2010)				**58,879**

Baseline (July 2011)				**58,277**
Extra White Paper Positions				1,979
SRP impact				-1,629
2018-19 target strength (July 2011)				**58,627**
2013 Defence White Paper				**59,000**
New government target				**59,570**

Source: 2010-11 DAR, Budget Papers and the May 2009 and April 2010 SRP Booklets, 2014-15 PBS

How much do personnel cost?

Personnel costs for Defence including DMO in 2014-15 will be around $11.0 billion rising to $11.9 billion in 2017-18. The recent per-capita cost of civilian and military personnel appears in Tables 2.5.6 to 2.5.8. Unfortunately, the PBS does not provide enough information to calculate budgeted per-capita costs.

Table 2.5.6: Per-capita permanent ADF personnel expenses

	Military Numbers	Expense $ 000's	Per Capita	Nominal Growth
00-01	50,355	4,151,801	$82,451	
01-02	50,932	4,377,827	$85,954	4.2%
02-03	52,080	4,568,493	$87,721	2.1%
03-04	52,034	4,890,100	$93,979	7.1%
04-05	51,813	4,757,900	$91,828	-2.3%
05-06	51,151	5,093,100	$99,570	8.4%
06-07	51,504	5,515,651	$107,092	7.6%
07-08	53,109	6,062,882	$114,159	6.6%
08-09	54,748	6,751,456	$123,319	8.0%
09-10	57,697	7,456,595	$129,237	4.8%
10-11	59,084	7,834,680	$132,602	2.6%
11-12	57,994	7,989,786	$137,769	3.9%
12-13	56,607	8,054,390	$142,286	3.3%
			Average	**4.7%**

Source: Defence Annual Reports, expenses adjusted to take account of Reserve component.

Table 2.5.7: Per-capita DMO civilian personnel expenses

	DMO Civilians	DMO Expenses '000s	DMO Per Capita	Nominal Growth
05-06	4,502	$353,892	$78,608	
06-07	4,951	$409,262	$82,662	5.2%
07-08	5,304	$458,992	$86,537	4.7%
08-09	5,552	$493,611	$88,908	2.7%
09-10	5,526	$507,900	$91,914	3.4%
10-11	5,533	$531,619	$98,216	4.5%
11-12	5,989	$592,265	$98,892	2.9%
12-13	5748	$591,070	$109,680	10.9%
			Average	**4.9%**

Source: Defence Annual Reports.

Note that figure for 2012-13 is overinflated due to redundancies paid and timing of DECA payments in 2012-13, DMO backfill positions are not counted because they result in a suppliers rather than personnel expense.

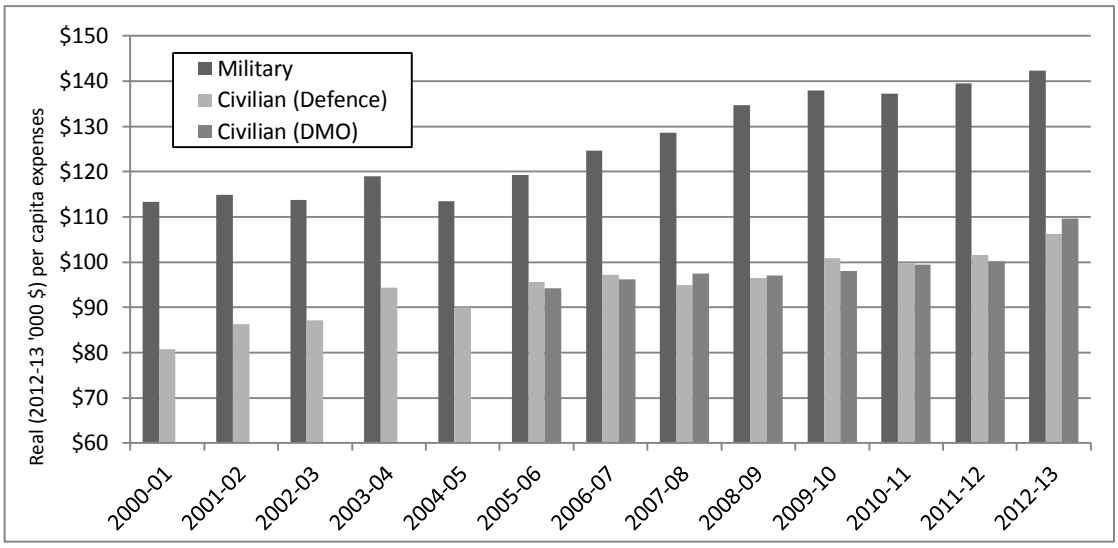
Table 2.5.8: Per-capita Defence civilian personnel expenses

	Civilian Numbers	Expense $ 000's	Per Capita	Nominal Growth
00-01	16,292	$956,661	$58,720	
01-02	16,819	$1,086,116	$64,577	10.0%
02-03	18,385	$1,235,752	$67,215	4.1%
03-04	18,303	$1,363,205	$74,480	10.8%
04-05	17,753	$1,293,100	$72,838	-2.2%
05-06	13,577	$1,084,382	$79,869	9.7%
06-07	14,516	$1,212,393	$83,521	4.6%
07-08	15,087	$1,271,223	$84,259	0.9%
08-09	14,815	$1,308,445	$88,319	4.8%
09-10	14,532	$1,373,377	$94,507	7.0%
10-11	15,115	$1,457,279	$96,413	2.0%
11-12	15,829	$1,588,389	$100,347	4.1%
12-13	15,786	$1,677,674	$106,276	5.1%
			Average	**5.1%**

Source: Defence Annual Reports. Note: excludes DMO past 2005-06.

The per-capita expenses include salaries, allowances, superannuation, health, redundancies, housing and fringe benefits tax. We've done our best (on the basis of incomplete information) to account for the cost of Reserve personnel in the estimate for the permanent ADF. In addition, the transfer of military compensation to Veterans Affairs in 2004-05 has been adjusted for. Historical per capita costs are depicted graphically in Figure 2.5.7.

Figure 2.5.7: Historical per-capita personnel costs



Source: Defence Annual Reports.

Personnel structures

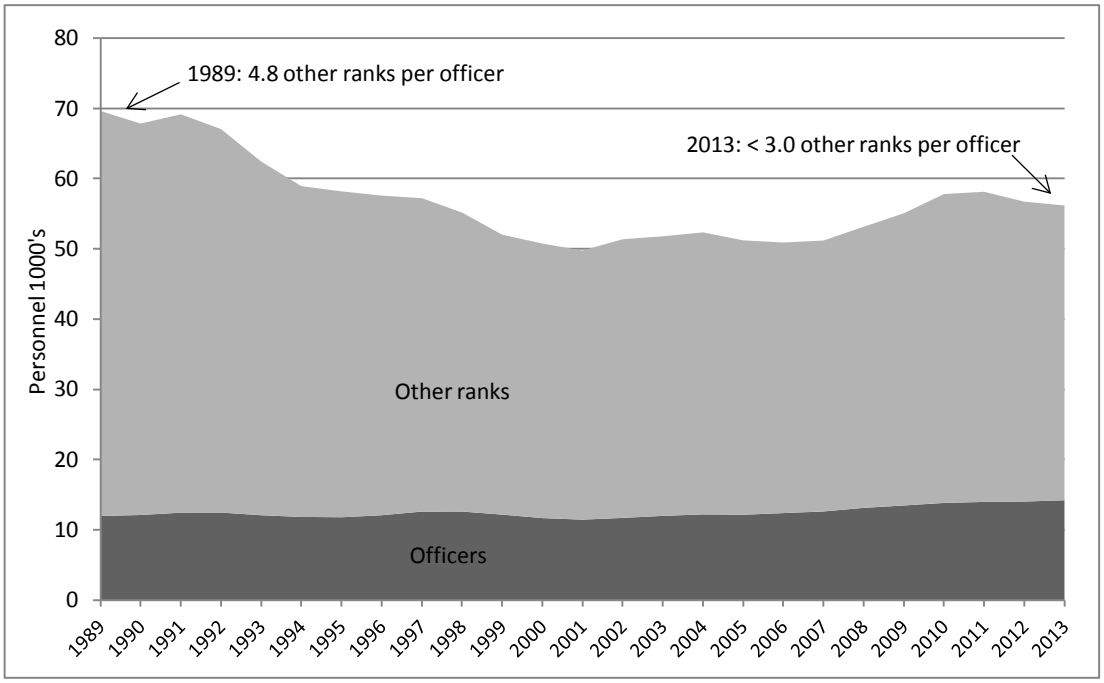
To facilitate understanding of the structure of the Defence workforce, it is useful to understand the nominal equivalence between different levels in the APS and ADF and between the three Services. For a comparison of relative ranks/levels, see Table 2.5.9.

Table 2.5.9: Rank/level comparison:

Civilian	Navy	Army	Air Force	
APS-4	Sub-Lieutenant	Lieutenant	Flying Officer	Officers
APS-5	Lieutenant	Captain	Flight Lieutenant	
APS-6	Lt-Commander	Major	Squadron Leader	
EL-1	Commander	Lt-Colonel	Wing Commander	Senior Officers
EL-2	Captain	Colonel	Group Captain	
SES-1	Commodore	Brigadier	Air Commodore	Star-ranked and Senior Executive Service
SES-2	Rear Admiral	Major General	Air Vice-Marshal	
SES-3	Vice Admiral	Lt General	Air Marshal	

The breakdown of ADF personnel by rank, and civilians by level, appears in Table 11 on page 25 of the PBS. As the ADF contracted during the 1990s, the number of officers remained more or less constant. Then, as the size as the ADF grew over the past few years, the number of officers grew more quickly (see Figure 2.5.8). As a result, the percentage of officers in the ADF has grown from 17.2% in 1989 to 23.9% in 2010. This means that there are now around three enlisted men for every officer. To a large extent, the rising proportion of officers probably reflects the outsourcing of activities during the 1990s which saw more enlisted personnel than officers discharged. However, the recent expansion of the army has marginally reversed the trend.

Figure 2.5.8: Permanent ADF Numbers 1989 – 2013 as at 30 June



Source: Defence Annual Reports.

Generals and Mandarins

The trends in star rank, senior executive, and senior officer numbers are shown in Table 2.5.10; the most recent data is taken from the 2014-15 PBS. Changes in reporting account for the gaps and lack of earlier data. As can be seen, over the past sixteen years the number of civilian senior executives has increased by 71% and military star-rank officers by 72%. At the same time, the civilian workforce grew by only 21% and the military workforce by only 11%. Over a similar time frame, the numbers of civilian and military senior officers have grown by 96% and 56% respectively. Although the budget papers show a reduction in the number of civilian senior officers in Defence and DMO in 2012-13, such predictions have been made in the past and not occurred.

Some care is needed looking at the apparent levelling off in the budget year in Table 2.5.10. In most years the plan is to slightly reduce the number of senior military and civilian managers in Defence, and in most years the opposite is found to have happened when the actual result is reported.

At every senior level in the civilian and military workforce the number of managers and executives has increased at a rate well in excess of the growth in the size of the overall workforce. However, as might be expected, the fastest rate of increase has occurred at the level of Deputy Secretary and 3-star military officer (Table 2.5.11) where much of the growth is very recent, including as a result of the 2007 Defence Management Review.

Table 2.5.10: Numbers of Senior Ranks and Executive Levels; average funded strength

	Civilian						Military	
	Defence Executives	DMO Executives	Total Executives	Defence Senior Officers	DMO Senior Officers	Total Senior Officers	Star Rank Officers	Senior Military Officers
1998-99	100		100	0	0	0	110	1,360
1999-00	106		106	0	0	0	0	0
2000-01	103		103	3,317	0	3,317	120	1,415
2001-02	117		117	3,844	0	3,844	119	1,467
2002-03	130		130	3,824	0	3,824	120	1,507
2003-04	123		123	3,889	0	3,889	119	1,528
2004-05	96	30	126	3,081	995	4,076	125	1,551
2005-06	102	29	131	3,385	1064	4,449	135	1,594
2006-07	108	29	137	3,656	1225	4,881	149	1,684
2007-08	121	32	153	3,911	1388	5,299	176	1,768
2008-09	126	35	161	3,970	1502	5,472	169	1,852
2009-10	128	36	164	4,192	1579	5,771	173	1,937
2010-11	undisclosed	undisclosed	172	undisclosed	undisclosed	6,250	181	1,941
2011-12	undisclosed	undisclosed	175	undisclosed	undisclosed	6,796	184	1,850
2012-13	133	35	168	5,010	1,757	6,767	188	1,983
2013-14	133	35	164	4,934	1,590	6,524	189	2,101
2014-15	136	35	171	4,829	1,660	6,489	189	2,126
Growth	**36%**	**17%**	**71%**	**-**	**-**	**96%**	**72%**	**56%**

Source: Defence Annual Reports, 2012-13 and 2013-14 estimated actual.

Table 2.5.11: Band 3 and 3-Star officers (equiv. Chief of Service - Deputy Secretary)

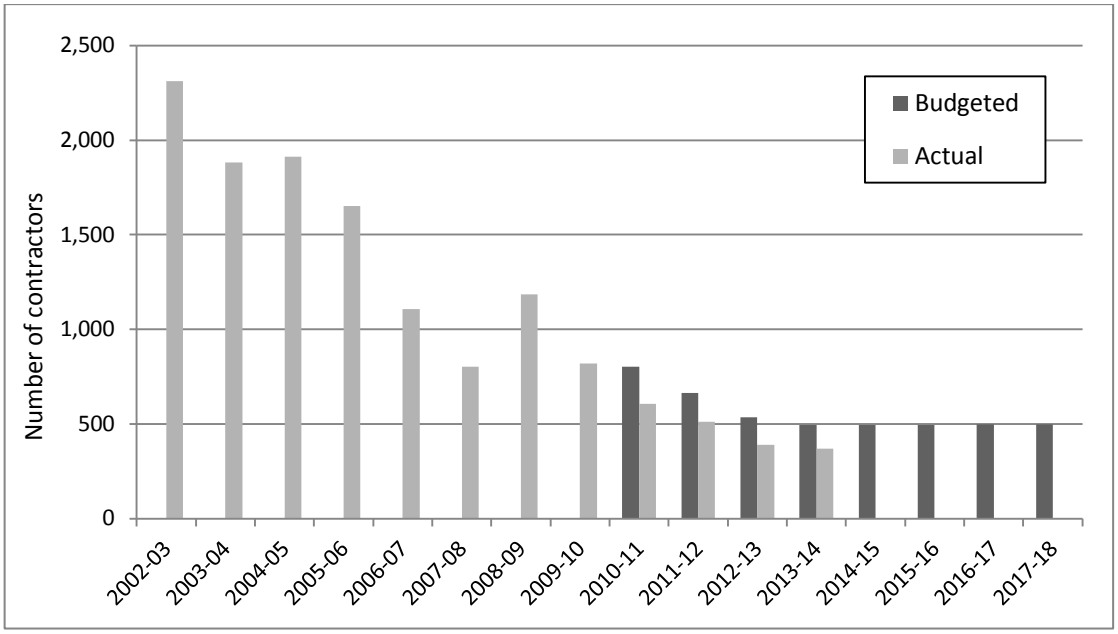
	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	Per cent
Assoc. Sec														1	1	1	1	
Band-3 (Defence)	3	4	7	5	5	5	5	5	5	7	8	8	8	8	8	7	7	133
Band 3 (DMO)	1	1	1	1	1	1	1	1	1	4	4	5	5	5	5	5	5	400
Band-3 (DSTO)	2	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	50
subtotal	**6**	**8**	**10**	**9**	**9**	**9**	**9**	**9**	**9**	**14**	**15**	**16**	**16**	**17**	**17**	**16**	**16**	**183**
3-Star	4	4	4	4	4	5	5	5	5	6	6	6	6	6	6	6	6	50
Total	**10**	**12**	**14**	**13**	**13**	**14**	**14**	**14**	**14**	**20**	**21**	**22**	**22**	**23**	**23**	**22**	**22**	**120**

Source: DAR and 2014-15 PBS. Includes Chief of Division Grade 3 in DSTO. CEO of DMO counted as a Deputy Secretary.

Professional Service Providers

The Defence workforce includes a limited number of Professional Service Providers (PSP), sometimes called simply 'contractors' in line positions within the organisation. For most of the past decade, there was a concerted effort underway to reduce the number of PSP employed by Defence and DMO. In fact, Defence has claimed successive reductions in the number of PSP as an internal efficiency and are doing so again within the SRP. Note the temporary increase in 2008-09 against which savings were calculated in 2009.

Figure 2.5.9: Professional Service Providers



Source: Defence Annual Reports and 2014-15 PBS.

The number of contractors has fallen three years in a row and done so more quickly than budgeted for. However, these reduction need to be viewed with some caution. Over the past couple of years Defence has begun 'capability partners' to provide skills and expertise

not available within their own workforce. Because of the contractual arrangements under which capability partnerships are managed, the personnel they supply are not technically counted as PSP or contractors under Defence's definition. Nonetheless, people employed by the private sector are providing skills and capacity within Defence very much akin to that previously done by PSP/contractors. The Chief Financial Officer, Capability Development and Chief Information Officer Groups are believed to make extensive use of 'capability partners' and other external contractors to perform core roles.

In an answer to a Question on Notice from the Foreign Affairs Defence and Trade Committee on 17 October 2012 regarding the use of office space (Q86) Defence advise that 2,720 contractors were resident and working on Defence property. The largest concentration of contractors is in Canberra, including 547 on Russell Hill, 310 at Campbell Park, 303 at Deakin, 280 at Anzac Park West, 269 at Brindabella Park, and 264 at Fairbairn. And yet we are told that there are only 377 contractors employed across the organisation as a whole.

No doubt most of the people reported as contractors in the Defence response are external providers employed by firms contracted by Defence to perform a service such as facility security, IT delivery or administrative functions that has been outsourced. However, it's the taxpayer that's ultimately paying the bill for everyone in the building (and some beyond). Clearly, greater transparency of the effective workforce capacity delivered by collocated service providers (including capability partners) should be disclosed. Otherwise, we cannot take seriously either the reported size of the Defence workforce or claims of savings due to the reduction in the size of the workforce.

Defence Remuneration

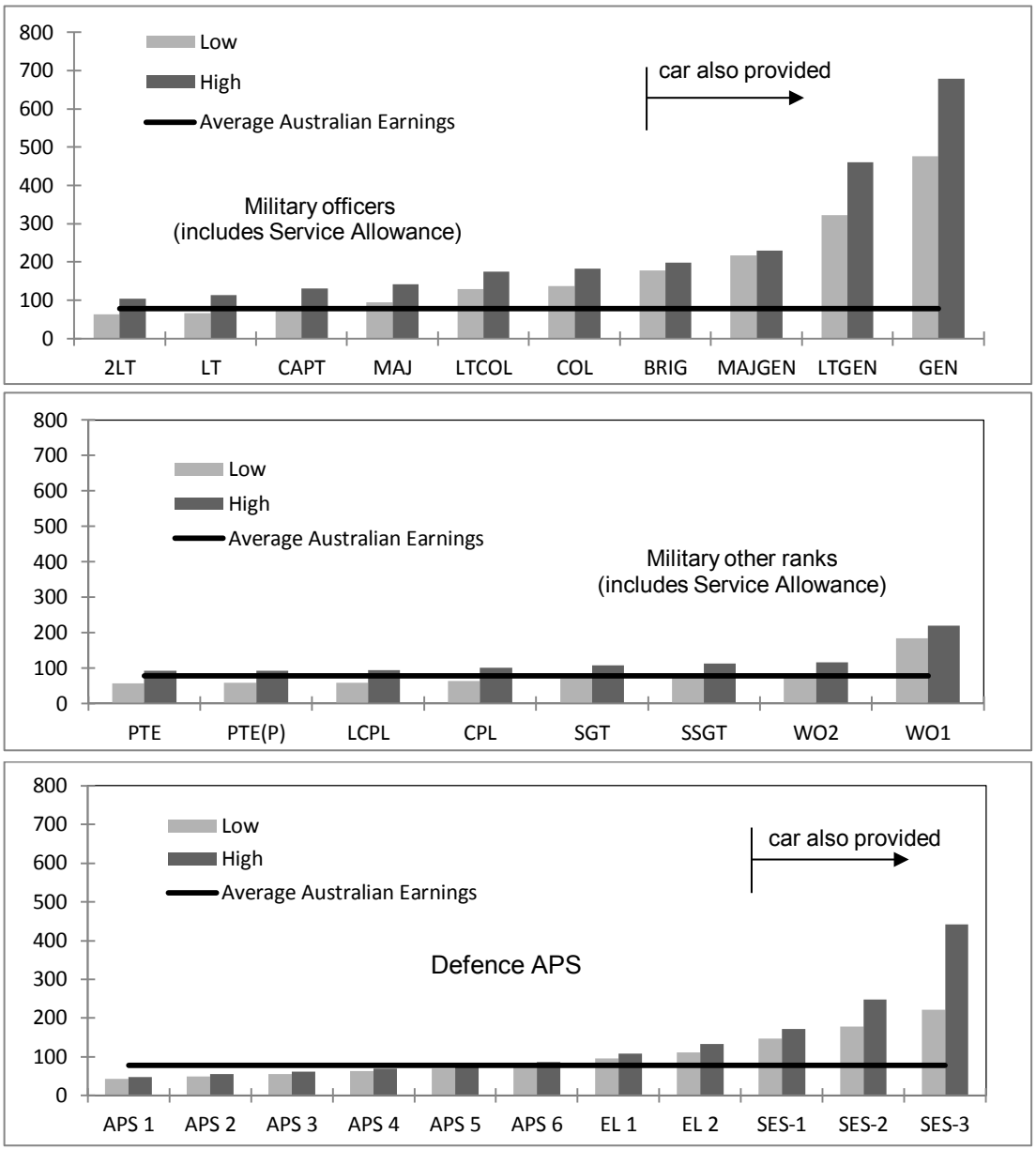
The PBS does not deal with Defence remuneration. But because the largest single slice of the Defence budget goes towards civilian and military salaries we have included a short summary of the key data. Figure 2.5.10 shows Defence military and civilian salaries circa late 2010 benchmarked against the latest available Average Weekly Ordinary-Time Earnings for Full-Time Earning Adults (AWOFTEA) from December 2010. (SES civilian and military two/three-star data are for mid-2010.)

Note that the military figures in Figure 2.5.10 include both salary and the service allowance of $12,121 per annum received by all service personnel below the rank of Colonel. No account has been taken of the ancillary benefits received by military personnel like housing, medical, rations and specific allowances for skill, hardships and deployments. Note that the three graphs do not use the same scale.

The comparison of defence salaries with AWOFTE in Figure 2.5.10 represents only a snapshot in time. The relative dynamics of average earnings, defence salaries and the cost of living is quite another issue. Indeed, as Figure 2.5.11 shows, over the past decade and a half, defence salaries have consistently grown more slowly than average earnings but more quickly than the Consumer Price Index (CPI).

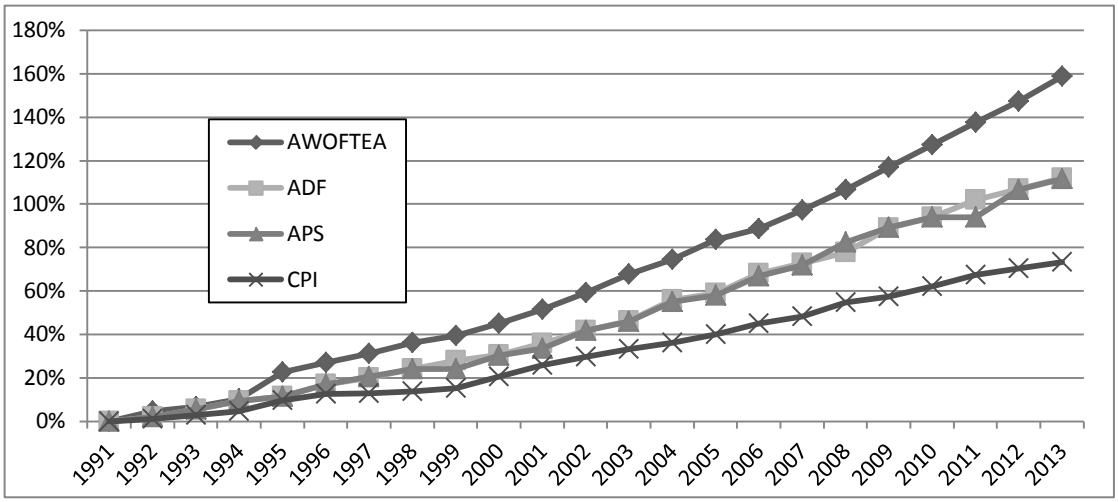
Care is needed in interpreting the relative growth in average earnings, defence salaries and consumer prices. Structural changes to the Australian economy over the period will have altered the type and value of employment relative to that performed within the ADF.

Figure 2.5.10 Defence salaries, circa January 2014



Source: ABS; Military pay rates as at January 2014, SES, Mag Gen, Lt Gen and Gen as at July 2013, other APS as at May 2014

Figure 2.5.11: Defence civilian and military salaries – rate of increase



Source: ABS weekly earnings data and Defence pay rates.

Finally, it is important to note that Defence executive remuneration is not limited by the salary increases granted to the rank and file. Over the past six years, the Defence annual report disclosed salary ranges for various levels of employee. As Table 2.5.12 shows, it has been a particularly good time for senior executives and star-ranked officers. The range of increases corresponds to changes to the upper and lower levels of the salary range in each case.

Table 2.5.12: Senior executive salary increases 2006 to 2013

	Increase in minimum salary	Increase in maximum salary
Civilian level		
Secretary	undisclosed	undisclosed
Deputy Secretary (SES-3)	40.1%	116.0%
First Assistant Secretary (SES-2)	39.5%	46.4%
Assistant Secretary (SES-1)	40.1%	34.4%
Non-executive APS salary increase	31.4%	
Military level		
General (CDF)	65.9%	137.0%
Lieutenant General (3-star)	50.7%	108.7%
Major General (2-star)	54.4%	62.7%
Brigadier (1-star)	28.3%	54.8%
Non star rank military salary increase	28.3%	

Source: 2005-06 and 2012-13 DAR. Non-executive figures are ADF pay rates and civilian DECA from June 2006 to June 2013.

Demographics of the ADF

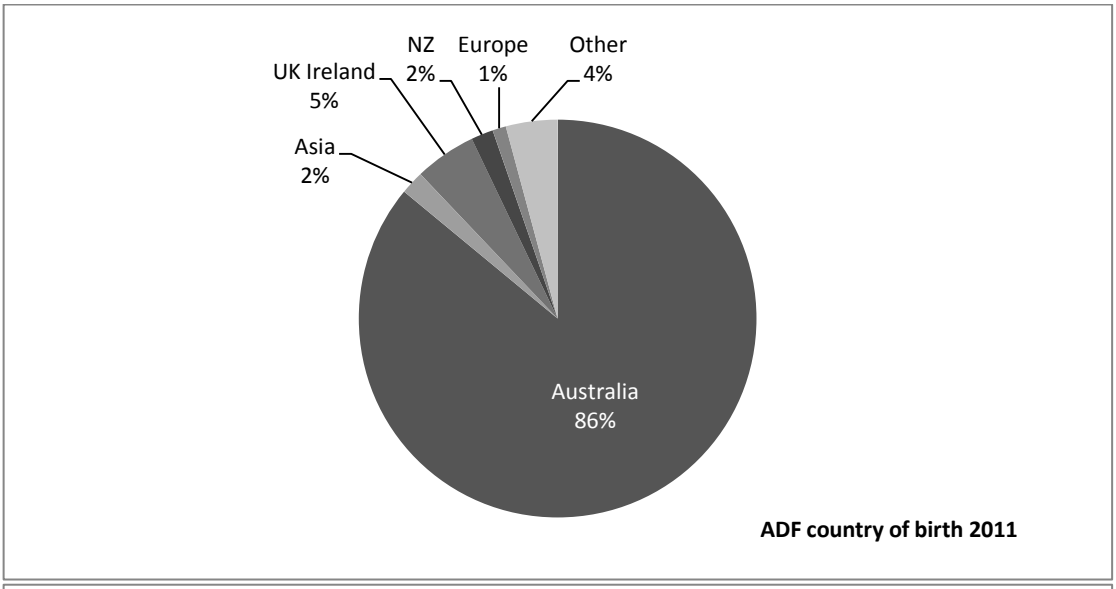
The defence force is disproportionately drawn from the Anglo-Celtic part of the Australian population. The extent of over-representation is difficult to fully assess because the only available data concerns country of birth and not family background. Even so, as Table 2.5.13 shows, there are significant differences between the defence force and the community. The essential results are reproduced graphically in Figure 2.5.12. The figures are similar for the part-time Reserve force. Note that the over-representation of Anglo-Celtic born individuals extends to the civilian workforce of the Department of Defence.

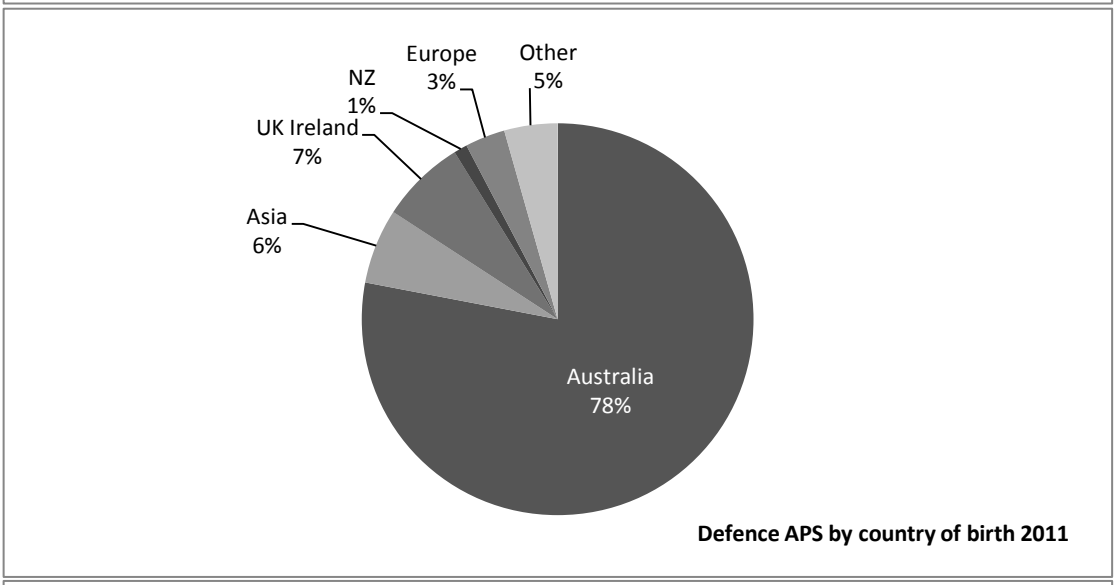
Table 2.5.13: Ethnic composition of the Australian Defence Force

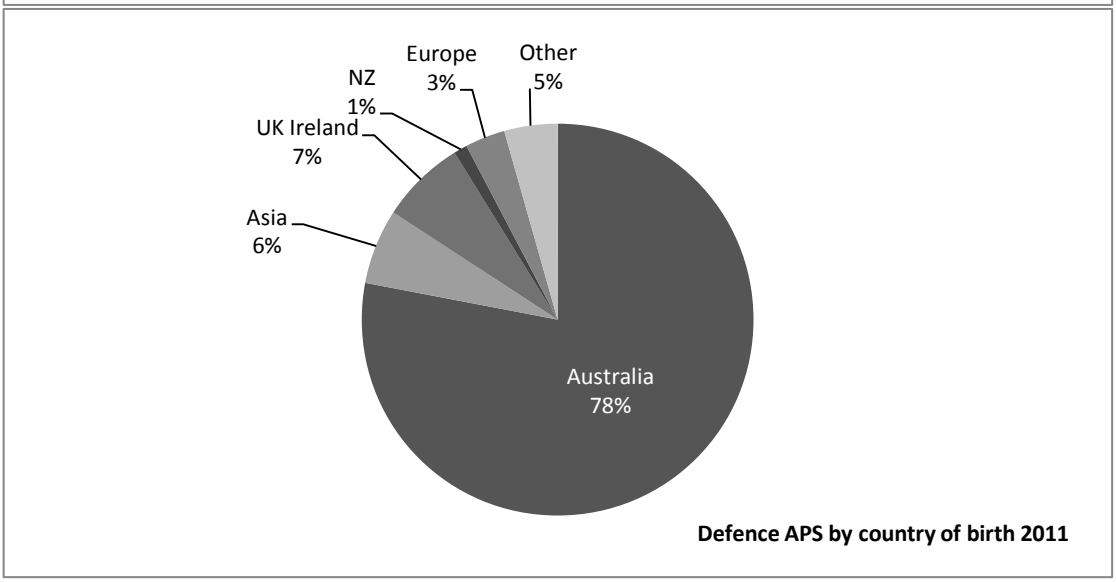
Place of Birth	Defence Force 2011	Defence Civilians 2011	Australian Workforce 2011
Australia	86%	78%	71.9%
UK and Ireland	5%	7%	6.4%
New Zealand	1.8%	1.1%	3.1%
Europe	1.1%	3.3%	2.6%
Asia	1.9%	6.2%	8.5%
Other	4.2%	4.4%	7.5%

Sources: Defence military and civilian figures from the 2011 Defence Census; all other figures from Census 2011 conducted by the Australian Bureau of Statistics.

Figure 2.5.12: Composition of the ADF, Defence APS and Australian workforce by birth





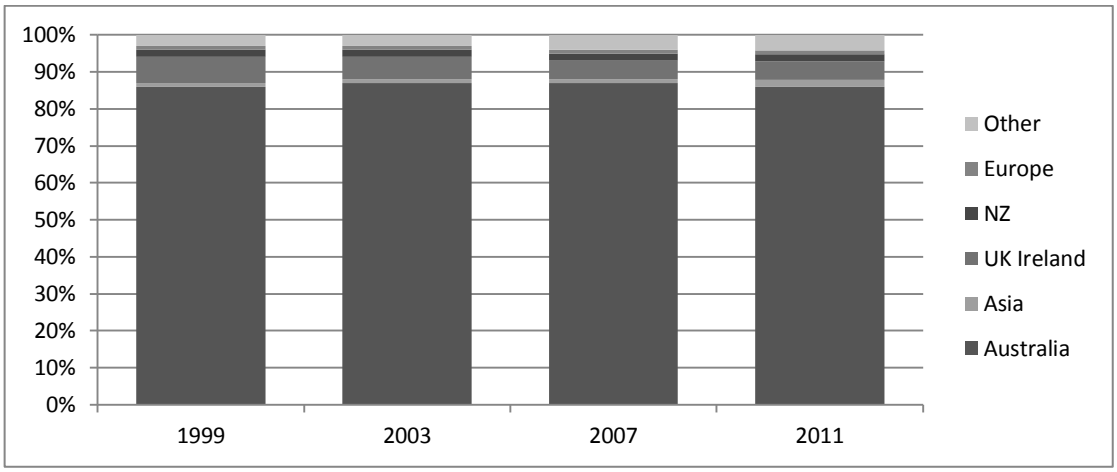


Sources: as per Table 2.5.13

It is regrettable that our defence force is unable to attract recruits equally from across the Australian community. Defence advises that programs are underway to redress the issue including the Multicultural Recruitment and Retention Strategy.

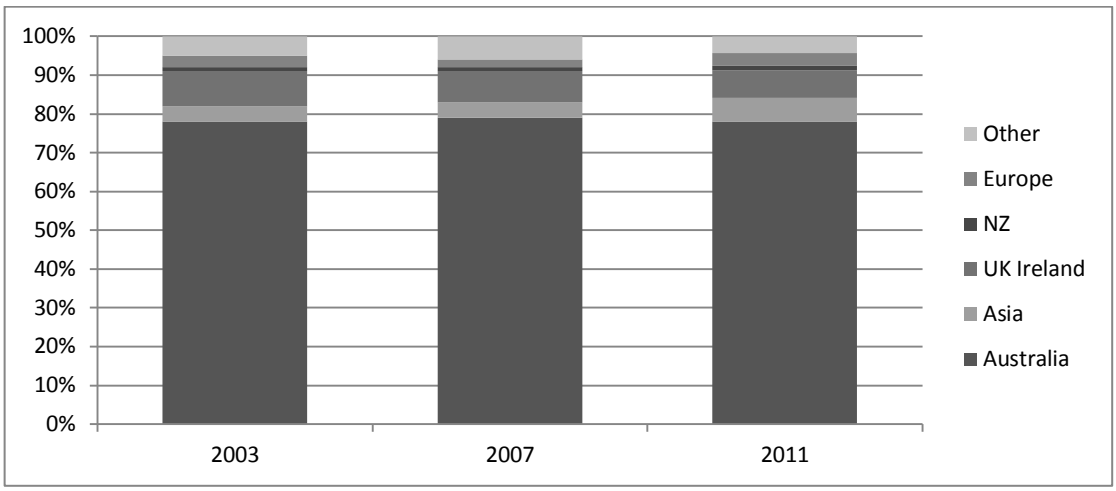
The difference between the ADF/Defence and broader Australian society is not a new issue. As the results from the past four Defence census show in Figure 2.5.13 and Figure 2.5.14. And as Figure 2.5.15, the ADF and Defence APS have a smaller share of indigenous Australians than the population in general.

Figure 2.5.13: Ethnic composition of the ADF by birth 1999-2011



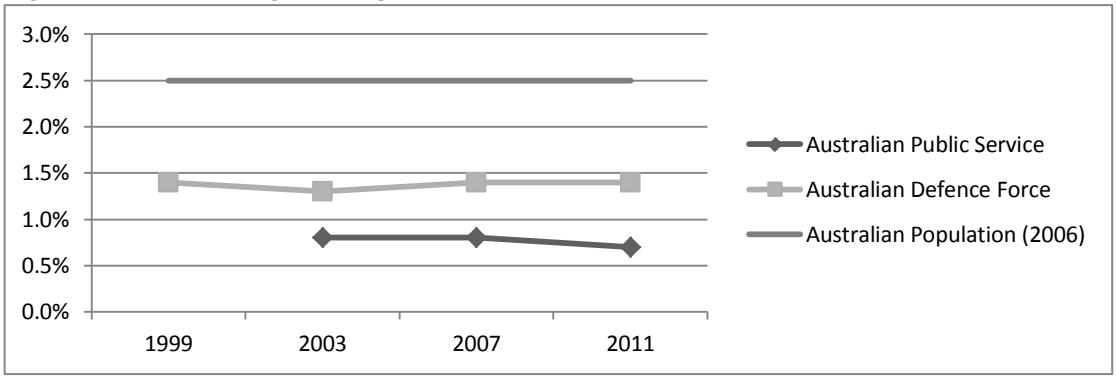
Sources: Defence Census 1999, 2003, 2007, 2011

Figure 2.5.14: Ethnic composition of the Defence APS by birth 2003-2011



Sources: Defence Census 2003, 2007, 2011

Figure 2.5.15: Percentage of indigenous persons in ADF, Defence APS and Australian population



Sources: Defence Census 199, 2003, 2007, 2011

Another area where the demographics of the Australian defence force and the society differ is gender. Table 2.5.14 shows the proportion of women and the share of jobs open to women across the permanent uniformed and civilian workforces. Similar results hold for the part-time Reserve force. In early 2011, the government announced that all positions will eventually be made open to women and a staged program has been set it train to make good on that goal.

Table 2.5.14: Women in Defence (full time) 30 June 2013

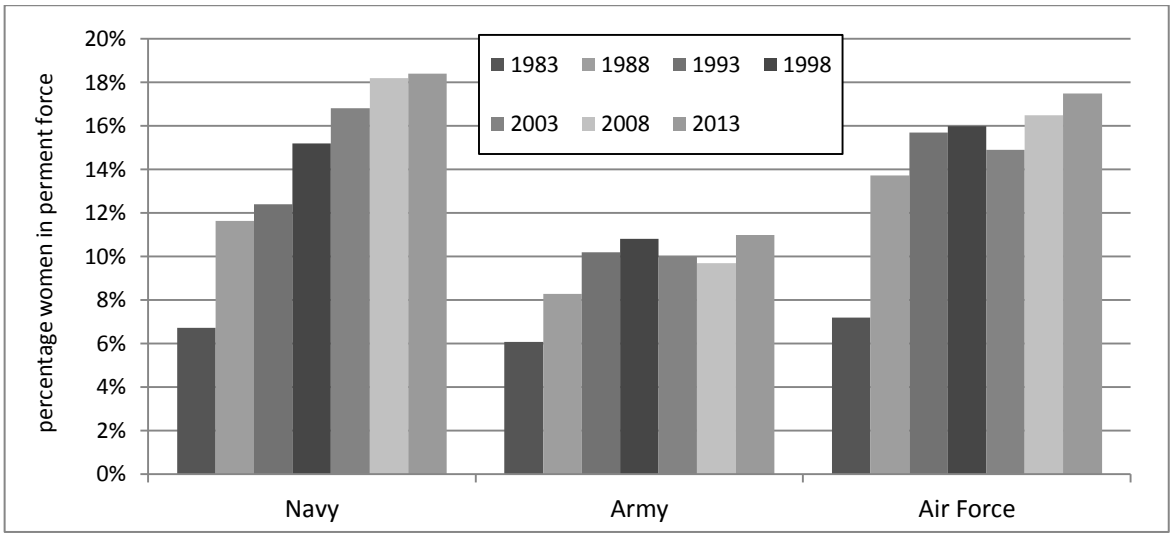
	Navy	Army	Air Force	Total military	Defence civilians
% of positions open to women				93%	100%
% of women in uniform	18.4%	11.0%	17.5%	14.4%	40.7%

Source: 2012-13 DAR

It is not that the defence force has ignored the issue in the past. Over at least the past fifteen years a serious effort has been mounted to recruit and retain women in the force. A zero-tolerance policy towards sexual harassment is now in place across the entire force. Recruiting advertisements depict women as integral members of the defence force and highlight the opportunities available to them (and the same has more recently become true for persons from diverse ethnic backgrounds). The number of positions open to women has been expanded in all three Services and an increasing number of women are reaching the higher ranks. More flexible arrangements are now in place to help female members manage the dual demands of career and family, and childcare facilities have been established in and around most military bases.

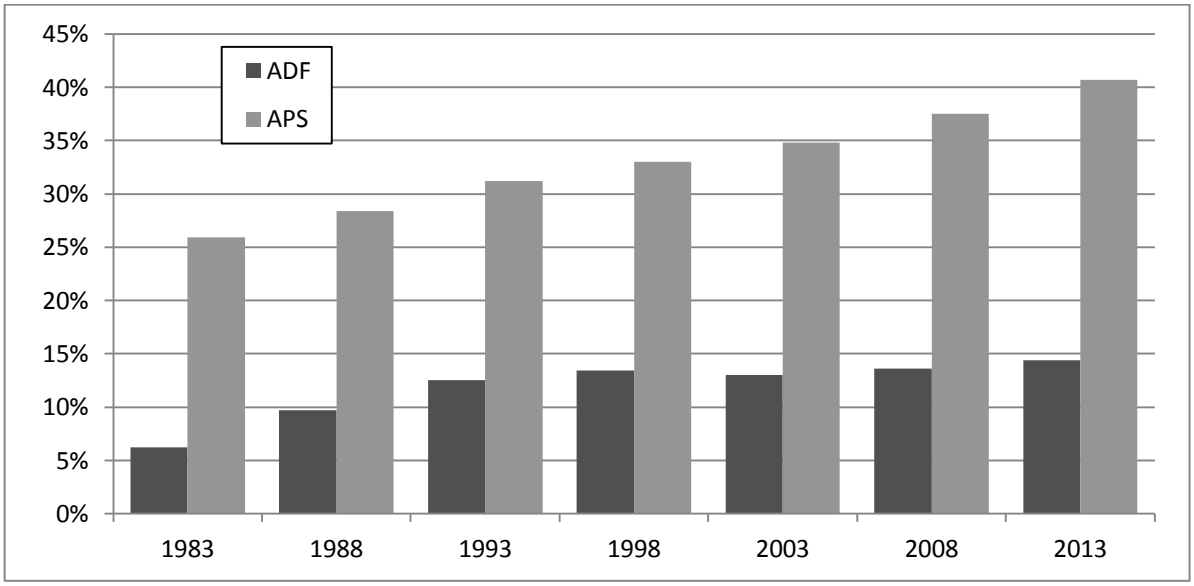
Yet, the proportion of women in the force has grown from only 12.8% to 14.4% over the decade, see Figures 2.5.16 and 2.5.17. Although the proportion of women in allied forces is similarly low that does not mean that the defence force should relax its effort to attract women to serve. The defence force needs the best people it can find and women represent the largest under-utilised pool of potential recruits in the community.

Figure 2.5.16: Women in the defence force



Source: 1982-82 to 2012-13 DAR

Figure 2.5.17: Women in Defence



Source: 1982-82 to 2012-13 DAR

2.6 Outcomes and planned performance

The Cost of Outcomes and Programs

Under the framework explained in Chapter 1.3 of this Brief, the government funds Defence to achieve designated outcomes via a series of programs. The core of the Defence Budget is a statement of the costs and planned performance of outcomes and programs on p.26–80 of the PBS. Unfortunately the 2009-10 transition from 'output groups' to 'programs' was accompanied by the abandonment of 'outputs' that contained a more granular explanation of capabilities held by the three Services. Specifically, twenty-two capability related outputs were coalesced into a mere three programs resulting in a seven-fold reduction. The departmental expense of outcomes and programs appear in Table 2.6.1.

Table 2.6.1: Departmental outcome and program expenses ($m)

Outcome 1: The protection and advancement of Australia's national interests through the provision of military capabilities and the promotion of security and stability	**Net Cost 2008-09 (actual)**	**Net Cost 2009-10 (actual)**	**Net Cost 2010-11 (actual)**	**Net Cost 2011-12 (actual)**	**Net Cost 2012-13 (actual)**	**Net Cost 2013-14 (project)**	**Net Cost 2014-15 (project)**
Program 1.1: Office of Sec/ CDF	207	196	146	180	150	164	160
Program 1.2: Navy Capabilities	3,979	3,745	4,045	3,991	4,187	4,586	4,797
Program 1.3: Army Capabilities	5,015	5,093	5,306	5,290	5,196	5,729	5,986
Program 1.4: Air Force Capabilities	3,906	3,699	3,908	4,223	4,278	4,565	4,762
Program 1.5: Intelligence Capabilities	501	562	572	544	539	518	538
Program 1.6: Defence Support	3,169	3,319	3,429	3,844	3,660	3,729	4,086
Program 1.7: Chief Information Officer	697	806	842	1,076	908	1,090	979
Program 1.8: People Strategies & Policy	257	286	269	305	351	461	483
Program 1.9: DSTO	375	403	418	450	434	421	408
Program 1.10: VCDF	1,318	1,012	1,103	1,383	1,337	1,197	1,231
Program 1.11: Joint Operations Comd.	95	103	37	38	32	48	52
Program 1.12: Capability Development	130	365	482	258	-50	345	1,423
Program 1.13: Chief Finance Officer	819	317	402	465	458	586	557
Outcome 1	**20,468**	**19,906**	**20,959**	**22,047**	**21,480**	**23,439**	**25,462**
Outcome 2: The advancement of Australia's strategic interests through the conduct of military operations and other tasks as directed							
Program 2.1: Immediate neighbourhood	173	161	182	176	133	42	3
Program 2.2: Wider interests	557	892	889	783	798	981	350
Outcome 3: Support for the Australian community and civilian authorities as requested by Government							
Program 3.1: Defence Contribution to National Support Tasks in Australia	15	11	11	118	15	54	68
Total net cost (non-administered)	**21,211**	**20,970**	**22,041**	**23,124**	**22,426**	**24,516**	**25,883**

Source: 2014-15 PBS and various DAR (Note: Programs were re-enumerated in the 2013-14 PBS)

Note that, in order to capture the overall cost of delivering programs, non-cash expenses due to the depreciation of equipment are included in the net cost in Table 2.6.1. Also funds appropriated for administered programs (which are not controlled by Defence) for home-loan assistance and military superannuation and retirement benefits have been omitted.

While one might expect that Outcome 2 would include the net additional cost of operations undertaken by the ADF, to the extent that operational supplementation does not have a large capital investment component this tends to be the case.

The outcome and programs for the DMO are listed in the PBS in Table 82 [p. 145], as reproduced in Table 2.6.2.

Table 2.6.2: Total outcome and program expenses ($m)

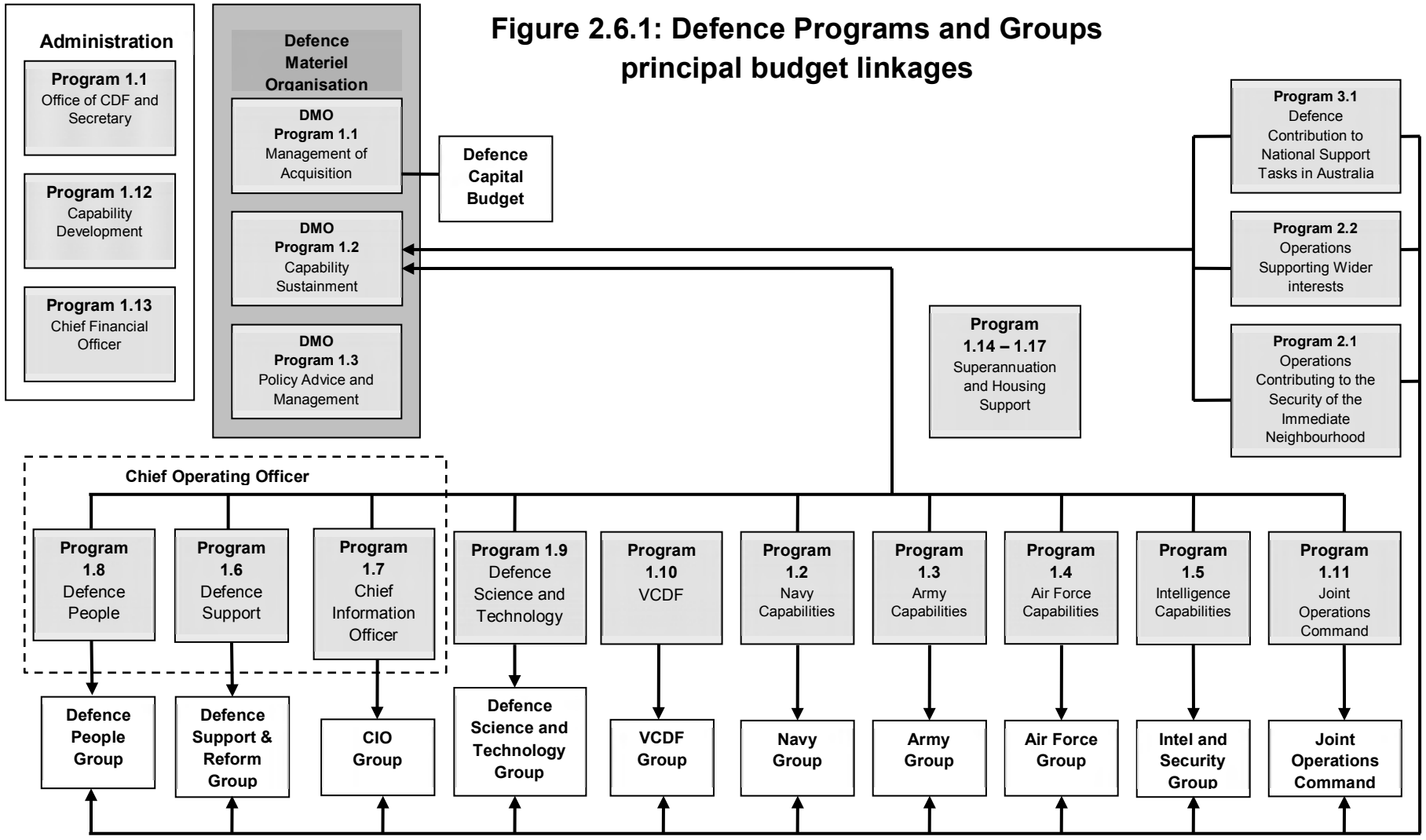
Outcome 1: Contributing to the preparedness of the Australian Defence Organisation through acquisition and through-life support of military equipment and supplies	**Expense 2008-09 (actual)**	**Expense 2009-10 (actual)**	**Expense 2010-11 (actual)**	**Expense 2011-12 (actual)**	**Expense 2012-13 (actual)**	**Expense 2013-14 (estimate)**	**Expense 2014-15 (budget)**
Program 1.1 Management of Capability Acquisition	4,842	5,963	5,794	4,584	3,964	4,344	6,309
Program 1.2 Capability Sustainment	4,772	4,624	4,754	5,389	5,058	5,590	6,166
Program 1.3 Policy Advice and Management Services	75	92	86	109	113	110	105
Total DMO Outcome 1	9,690	10,679	10,633	10,083	9,135	10,044	12,580

Source: various DAR, 2014-15 PBS

There is considerable overlap between the funds listed under the Defence outcomes/programs and those for DMO. Around $6.2 billion worth of Defence's program costs represent the purchase of sustainment services from DMO (Output 1.2). Put simply, around half of DMO's programs are inputs to Defence's programs. This is consistent with DMO being a separate financial entity. DMO's other $6.3 billion program (Program 1.1) does not contribute to Defence's outputs. Instead, it represents the purchase of new capital equipment that will be used to deliver Defence's programs in the future.

As mentioned in Chapter 1, the new outcomes and programs are much more closely aligned with the actual organisation of Defence than were those employed from 1999-00 to 2007-08. Nonetheless, there are significant linkages between certain elements. We have tried to capture the situation in Figure 2.6.1. The essential points are as follows. The programs under Outcome 2 and 3 do not align with any single organisational entity. Instead they capture the net additional cost of operations that is apportioned to those groups that actually support and deliver the operations including DMO. At the same time, the DMO sustainment budget is reflected in the costs attributed to the various programs, principally Navy, Army and Air Force.

Figure 2.6.1: Defence Programs and Groups principal budget linkages



Program Statements

For each of the programs, the PBS contains an entry detailing the key performance indicators and a cost summary. In many cases, the key performance indicators read like the entries in a corporate plan. For example, the Office of the Secretary and CDF has eleven deliverables including;

Ensure Defence strategic policy objectives align with Government direction and priorities, including fiscal policy.

and two performance indicators, including;

Staff skills are developed and personnel management practices successfully balance competing priorities.

Little would be gained by repeating the very large number of equally sensible (and largely anodyne) key performance indicators that appear in the PBS. The interested reader can pursue them at leisure. Of more interest are the concrete performance measures set out for the military capability outputs.

Capability Performance

There are three overarching key performance measures for the capability related programs; preparedness, core skills and quantity. These same performance measures have been employed in Defence Annual Reports and PBS in one way or another since 1999. We explore these three measures below. In doing so, it's important to remember that many capability programs have additional specific performance measures.

Preparedness refers to the readiness and sustainability of the ADF to undertake operations, be it national support tasks, peacekeeping or war. The process by which preparedness targets are set is worth recounting.

To begin with, the government's White Paper sets out the broad strategic tasks that the ADF needs to be prepared to undertake—for example 'contributing to the security of our immediate neighbourhood'. Using this as a basis, Defence develops what is called *Australia's Military Strategy* which includes for each strategic task a series of *Military Response Options* which define the broad operational objectives without specifying how they are to be accomplished—for example 'maintain sea lines of communication to the north of Australia'. These Military Response Options then form the basis of the annual *Chief of the Defence Force's Preparedness Directive*.

The final result is a series of specific targets for each output. They are classified. But, for example, the Army might be required to 'be prepared to deploy a battalion at 90 days' notice to assist in a regional peacekeeping operation and to maintain the deployment for 12 months' (this example is purely illustrative).

Core Skills: Preparedness targets are driven by Military Response Options with an anticipated warning time of less than 12 months. To take account of possible longer-term tasks and the requirement to retain broad expertise in the three Services, an enduring performance target for the capability programs is to 'achieve a level of training that

maintains core skills and professional standards across all warfare areas'. The assessment of what is to be achieved, and whether it has been achieved, is ultimately based on the professional military judgement of the Service Chiefs.

Quantity: All of the capability programs include one or more 'quantity' measures that try to capture some aspect of how much capability will be delivered. Each of the three Services uses a different type of measure.

Army: With the exception of Army Aviation, the quantity measure used by Army is the presence of adequate quantities of trained personnel and equipment within an Output. No quantified targets are released publicly.

Navy: The basic measure of quantity used by Navy relates in some sense to the availability of ships and their crew to undertake a mission. Since 2005-06, the measure used has been the planned number of Unit Ready Days (URD), defined as follows: Unit Ready Days are the number of days that a force element is available for tasking, by the Maritime Commander, within planned readiness requirements. Unfortunately, over the past three years, Navy has aggregated its URD targets across fleets thereby obscuring the performance of troubled assets such as the submarines and amphibious vessels.

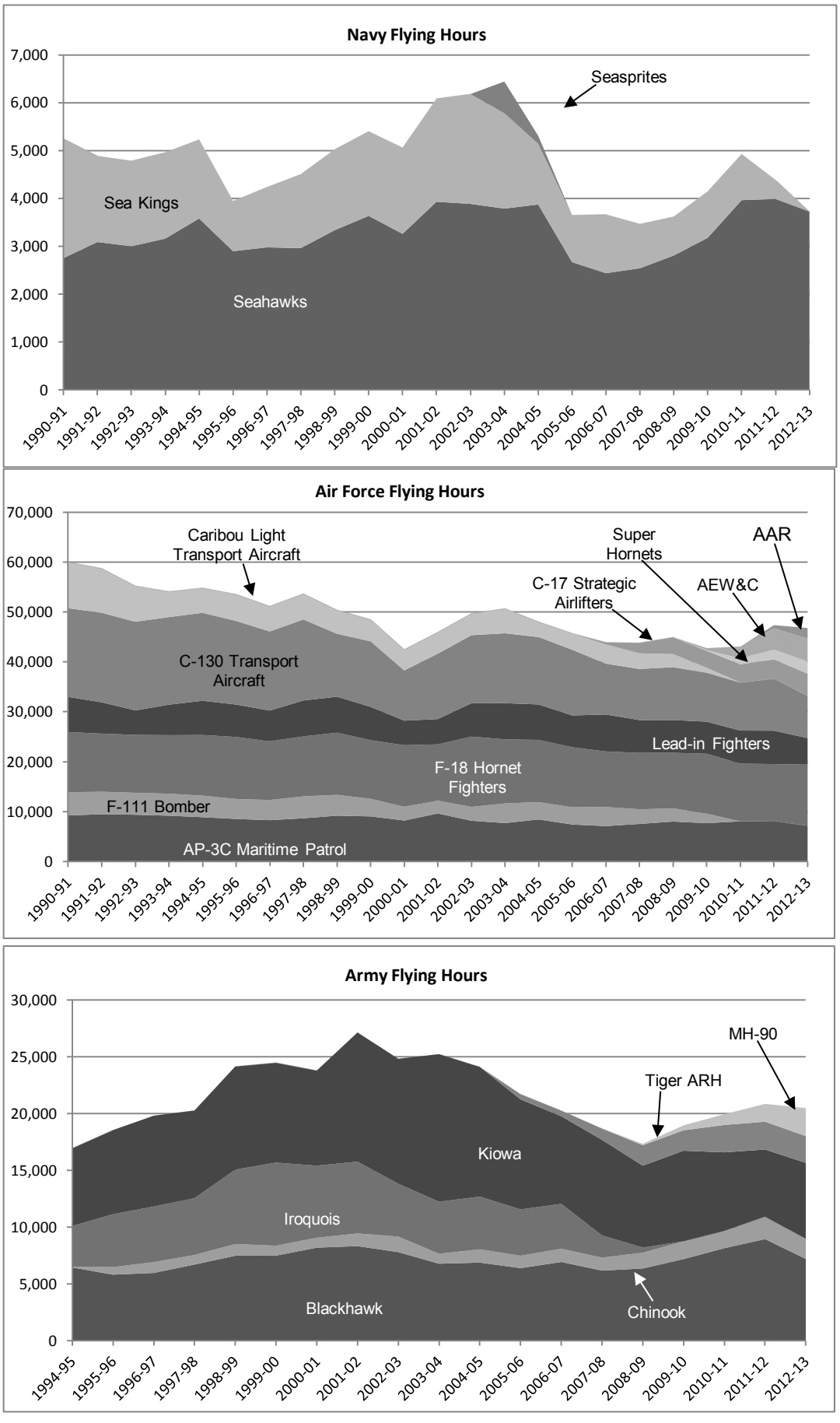
Air Force: The quantity measure used by Air Force and Naval and Army Aviation is the number of flying hours undertaken by the Program. These measures have been applied consistently for over a decade and constitute a useful diagnostic tool given the established baseline. (It would be useful if Navy's steaming-days and Army's track-miles were disclosed as they were in the past). Short- and long-term trends in ADF flying hours can be found in Table 2.6.3 and Figure 2.6.2.

Table 2.6.3: Planned ADF flying hours 2013-14 and 2014-15

Platform	2012-13	2013-14	Change	Remarks
F/A-18 fighter	13,000	13,000	0	
F/A-18 Super Hornet	4,800	5,050	+5%	
C-130 transport	7,350	7,350	0	
AP-3C Orion	7,900	7,900	0	
C-17 transport	5,200	5,200	0	
Hawk Lead-in fighter	7,500	7,500	0	
AEW&C	3,600	3,600	0	Fleet entering service
Chinook helicopter	1,850	1,700	-8%	Transitioning out of service
Black Hawk helicopter	6,200	5,090	-18%	Transitioning out of service
Kiowa helicopter	6,000	6,150	+3%	Service life extended to 2019
Armed recon helicopter	3,360	4,726	+41%	Fleet entering service
MH-60 Romeo	600	2,400		Fleet entering service
MRH-90 helicopter	4,000	5,400	+35%	Fleet entering service
Seahawk helicopter	3,600	2,800	+22%	Transitioning out of service

Source: 2013-14 and 2014-15 PBS

Figure 2.6.2: Long-term trends in ADF flying hours



Recent Performance

Table 2.6.4 summarises the non-quantity key performance indicators from the 2012-13 Annual Report. Defence uses a four-point performance scale of 'not met', partially met', 'substantially met' and 'met'. For simplicity of presentation, the scale is expressed as 0 to 3 ticks in the table below. The 'overall' assessment in Table 2.6.4 is the percentage of ticks received out of those possible for all performance indicators and deliverables. The arrows indicate movement relative to previous year result.

Table 2.6.4: Output Performance/Deliverables from the 2012-13 Defence Annual Report

Output	Advice	Preparedness	Core Skills	Overall
1.1 CDF Secretary	✓✓✓			89% ↓
1.2 Navy	✓✓✓	✓✓✓ ↑	✓✓	75% ↑
1.3 Army	✓✓✓ ↑	✓✓✓	✓✓✓ ↑	78% ↑
1.4 Air Force	✓✓✓	✓✓	✓✓	81% ↓
1.5 Intelligence	✓✓✓			87%
COO	-			100%
1.6 Defence Support	✓✓↓			81% ↓
1.7 Science & Technology	✓✓✓			83% ↓
1.8 Chief Information Officer				47% ↓
1.9 VCDF	✓✓✓			82% ↓
1.10 Joint Operations Command				100%
1.11 Capability Development				83% ↑
1.12 CFO	✓✓✓			100% ↑
1.13 People	✓✓✓			78% ↑
2.1 Operations - neighbourhood				100%
2.2 Operations - wider interests				100% ↑
3.0 National Tasks				100%

Source: 2012-13 DAR

Table 2.6.5 shows the planned and actual key performance indicators for quantity (URD and flying hours) for the major platforms operated by the three services. The results have been rated on the four-level scheme as follows; above 95% =✓✓✓, 95% to 75% =✓✓, below 75% =✓. Note that Navy drastically reduced the information it discloses in 2009-10.

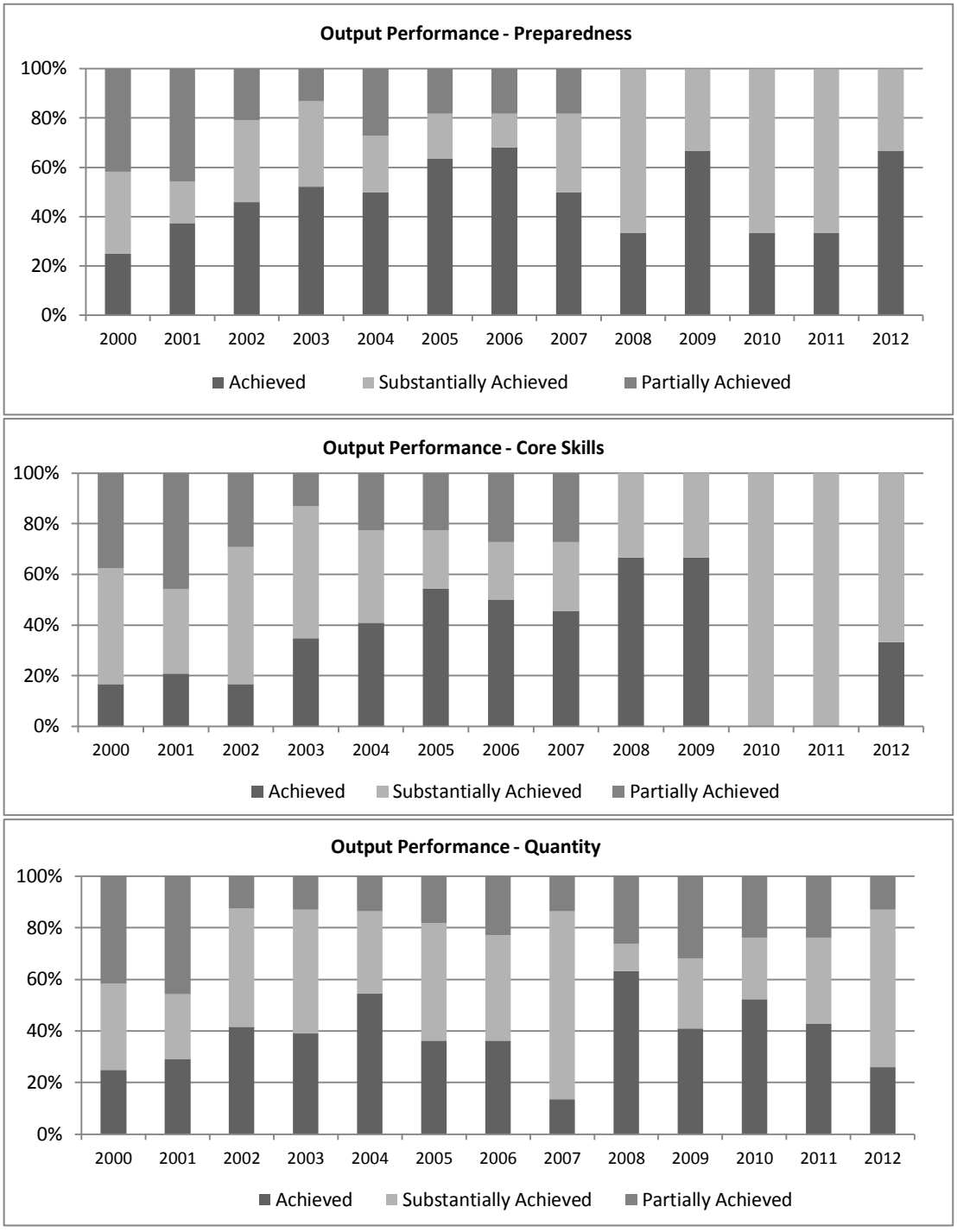
Table 2.6.5: Capability quantity planned (PBS) and delivered (Annual Report) 2012-13

Output	Planned	Reported	Percentage	Assessment
Navy fleets				
Frigates (FFG)	4,304 days	3,693 days	86%	✓✓
Frigates (FFH)				
Submarines				
Oil Tanker	2,417 days	1,924 days	80%	✓✓
Replenishment Ship				
Amphibious Ships				
Heavy Landing Ship				
Landing Craft Heavy				
Coastal Mine Hunters	5,323 days	4,472 days	84%	✓✓
Auxiliary Mine Sweepers				
Patrol Boats				
Clearance Diver Teams	2,555 days	2,555 days	100%	✓✓✓
Mobile Met Team				
Geospatial Team				
Hydrographic Ships	2,967 days	2,257 days	76%	✓✓
Survey Motor Launches				
Met Centre/Support				
Seahawks	4,200 hours	3,726 hours	89%	✓✓✓
Squirrels	4,000 hours	2,994 hours	75%	✓✓
LADS aircraft	980 hours	880 hours	90%	✓✓
Army fleets				
Black Hawk	7,500 hours	7,710 hours	103%	✓✓✓
Chinook	2,000 hours	1,777 hours	89%	✓✓
Kiowa	6,000 hours	5,722 hours	95%	✓✓✓
Armed Recon	7,147 hours	2,361 hours	33%	✓
MH-90	3,020 hours	2,464 hours	82%	✓✓
Air Force fleets				
F/A-18 Hornets	13,000 hours	12,251 hours	94%	✓✓
F/A-18 Super Hornet	4,800 hours	4,585 hours	96%	✓✓✓
Lead-in fighter	7,500 hours	5,307 hours	71%	✓
KC-30A (refuelling)	2,950 hours	2,121 hours	72%	✓
C-130 transports	7,350 hours	7,579 hours	103%	✓✓✓
AEW&C	2,800 hours	2,444 hours	87%	✓✓
C-17 Transports	4,800 hours	4,426 hours	92%	✓✓
AP-3C Maritime Patrol	7,900 hours	7,116 hours	90%	✓✓
B737 BJ VIP Transport	1,600 hours	1,376 hours	86%	✓✓✓
PC-9 aircraft	17,852 hours	15,928 hours	89%	✓✓
B300 King Air 350	11,400 hours	10,407 hours	91%	✓✓

Source: 2012-13 PBS and Annual Report

Figures 2.6.3 plots the delivery of Defence capability programs (previously outputs) as reported in the Defence annual reports between 2000-01 and 2010-11. Some care needs to be exercised in comparing the results from 2008-09 onwards with that from earlier years due to the substantial reduction in detail that arose in that year. The move from twenty-two capability sub-programs to a mere three (one for each Service) inevitably results in a reporting regime constrained to a smaller number of possible outcomes for preparedness and core skills. Nonetheless, note the recent erosion in the maintenance of core skills.

Figure 2.6.3: Output performance



Source: 2000-01 to 2012-13 DAR

Program Summaries

To augment the information provided in the PBS, we have prepared short program summaries containing background and historical performance information. In doing so, we have not sought to reproduce the material in the PBS but to complement it. Given the acute paucity of information provided in the PBS on what is to be delivered at the sub-program level, only a limited picture is possible. Information has been drawn from a variety of sources, including the Defence website.

Because the recently adopted program structure aligns closely with the actual organisational structure of Defence, we have taken the opportunity to sketch out the key elements in each of the programs. For those readers not familiar with the senior military and civilian levels, Table 2.6.6 details the correspondence of executive levels across the three services and civilian Senior Executive Service (SES).

Table 2.6.6: Executive comparison

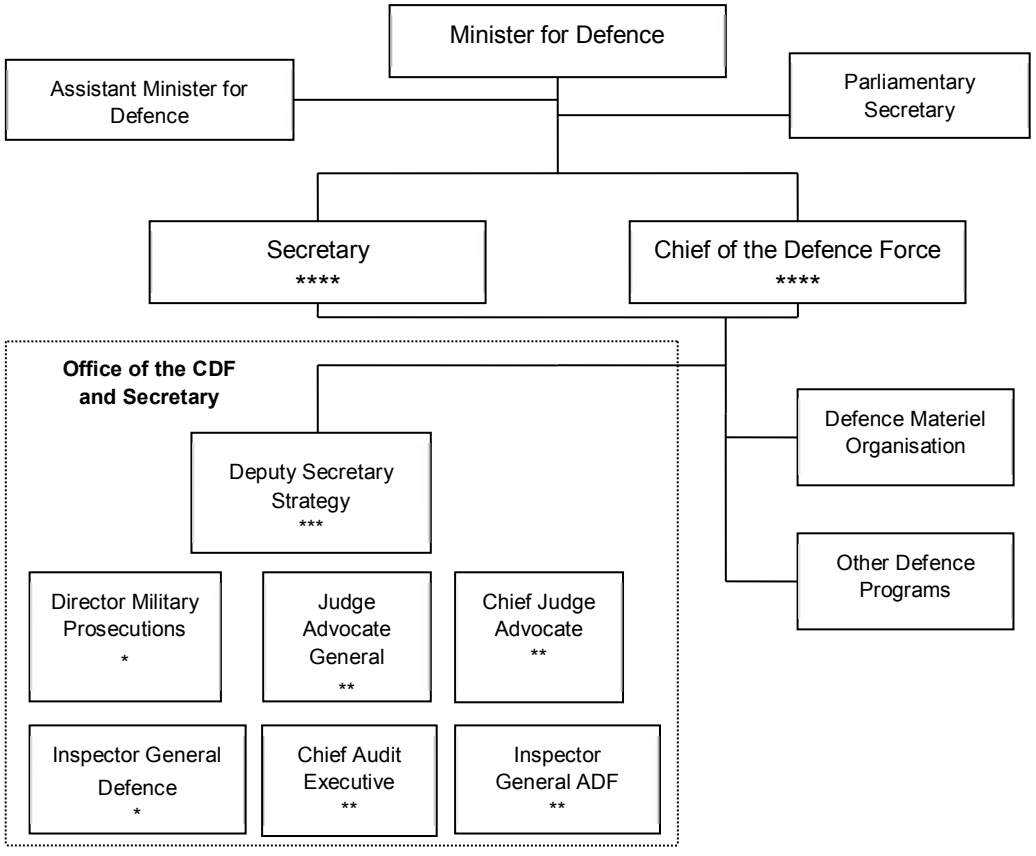
Civilian	Navy	Army	Air Force	Star Rank
Assistant Secretary (SES-1)	Commodore	Brigadier	Air Commodore	*
First Assistant Secretary (SES-2)	Rear Admiral	Major General	Air Vice-Marshal	**
Deputy Secretary (SES-3)	Vice Admiral	Lt General	Air Marshall	***
Secretary	Admiral	General	Chief Air Marshal	****

Program 1.1 – Office of the Secretary and CDF

Department outputs 2014-15: $160 million

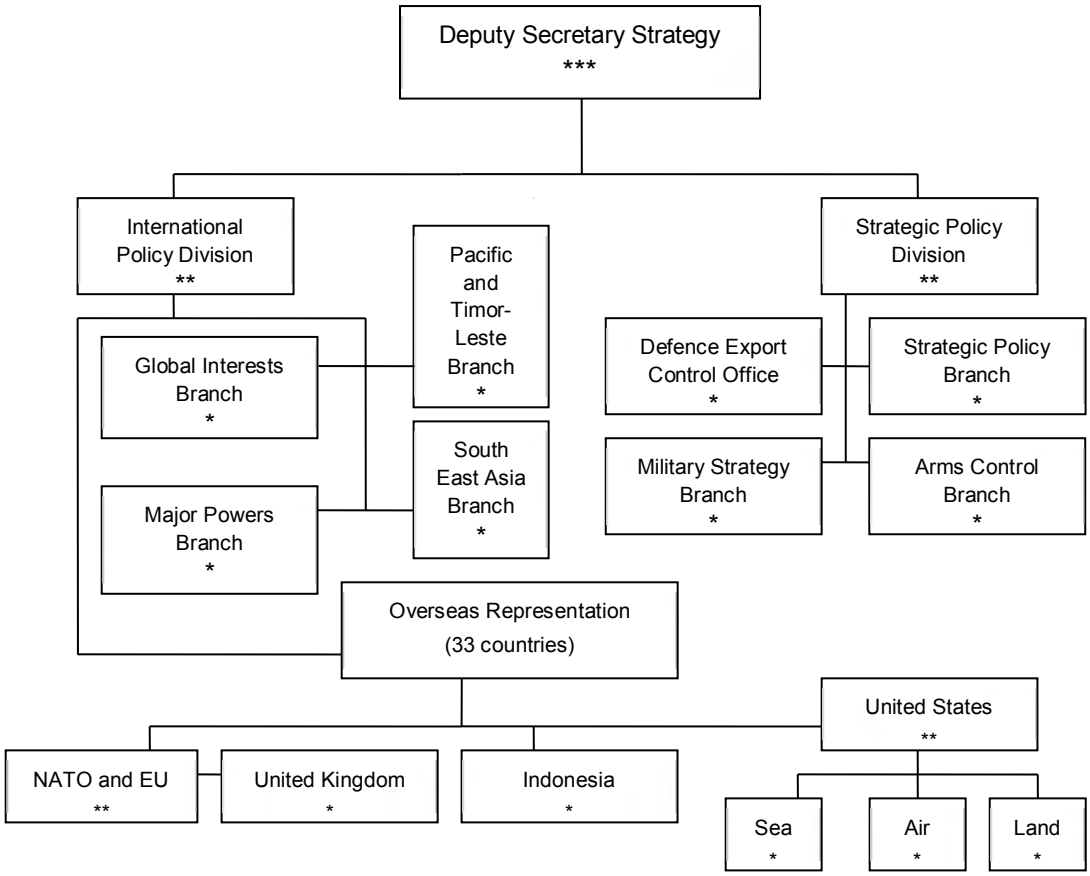
The Office of the Secretary and CDF was created as a result of the 2007 Defence Management Review. It combines the Deputy Secretary Strategy Group and the personal offices of the Secretary and CDF, the Audit and Fraud Control Division and a number of Military Justice agencies.

Within the Defence portfolio there are a number of independent military justice statutory offices. The offices the Judge Advocate General, the Chief Judge Advocate, the Director of Military Prosecutions and the Registrar of Military Justice are created by the *Defence Force Discipline Act 1982*. The Judge Advocate General and Director of Military Prosecutions report annually on the functions of their offices to the Parliament through the Minister for Defence. The Inspector General of the ADF is a statutory appointment created by the *Defence Act 1903* which reports directly to the CDF outside of the military chain of command.



Deputy Secretary Strategy manages two divisions. International Policy Division provides policy advice on international issues (including current and prospective operations) and manages Defence's day to day international relationships. Responsibilities include the oversight of Defence's overseas representatives in 33 countries around the world (mostly within Australian diplomatic missions) with cross-accreditations to a further 31 countries. Strategic Policy Division's role is to provide strategic policy guidance to support Government decision making. This guidance supports decisions in relation to Defence International Relationships and Defence's strategic policy, posture and capability development. The Division also manages Australia's arms and export controls.

Audit and Fraud Control Division, Inspector General ADF, Office of the Judge Advocate General and the Office of the Director of Military Prosecutions sit in OSCDF Group. They report to the Chief Operating Officer for administrative purposes as the Administrative Head of OSCDF Group.



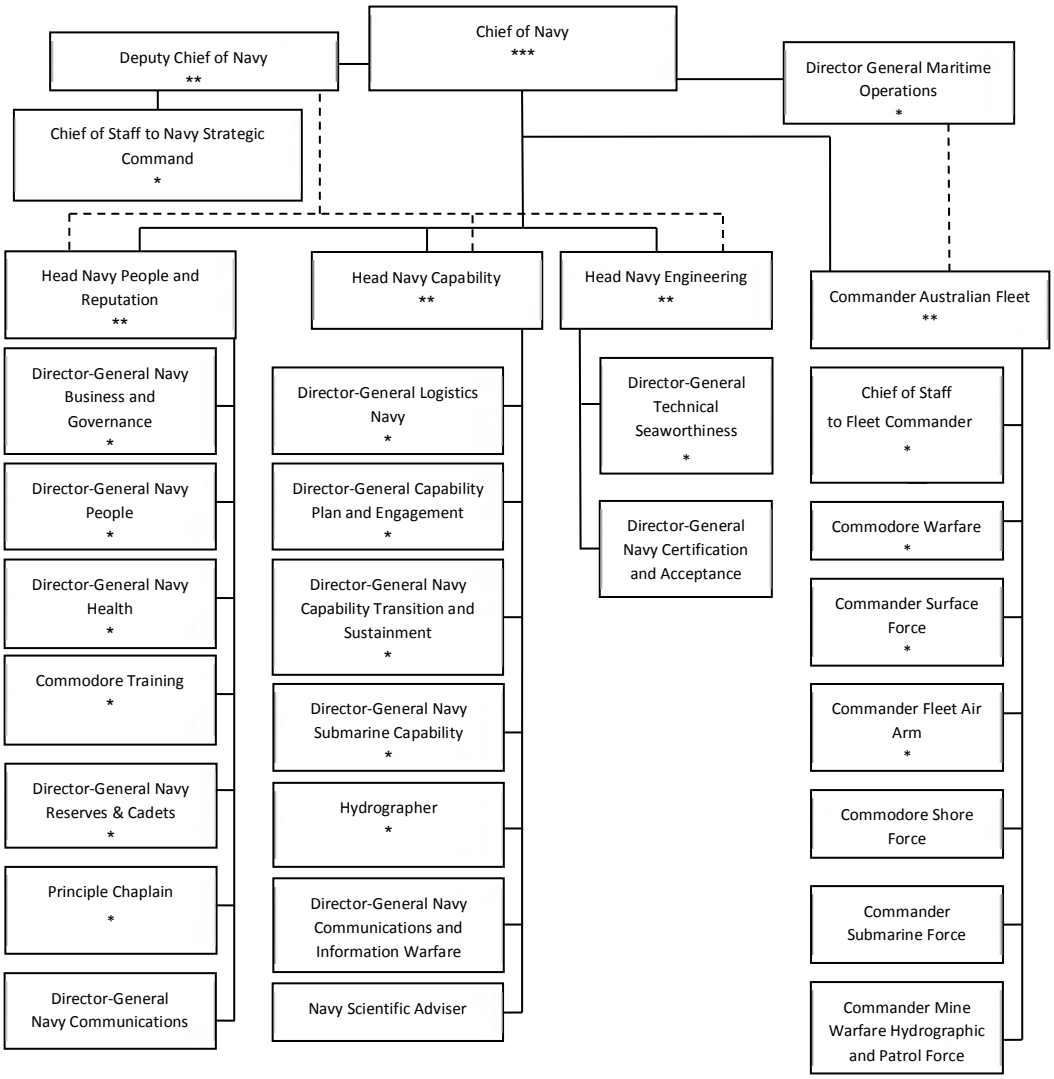
Program 1.2 – Navy Capabilities

Department outputs 2014-15: $4,797 million

The Navy's organisational structure comprises Navy Strategic Command and the subordinate Fleet Command. To a good approximation, Strategic Command is responsible for capability plans, personnel, administration and technical regulation, while Fleet Command is responsible for the day-to-day operation of the fleet and 'cradle to grave' training for all RAN personnel.

Structure and performance

The structure and performance of the Navy is set out below and overleaf. Because of the reduction in disclosure, it has not been possible to provide as detailed information as in the past.



Major combatants

Surface combatants

Four 1980s Adelaide class (US Oliver Hazard Perry class) Guided missile frigates (FFG) plus eight newer German-designed and Australian-built Anzac class frigates (FFH). Both vessels carry Harpoon anti-shipping missiles, anti-submarine torpedoes and Evolved Sea Sparrow surface-to-air missiles. Only the FFG are equipped with the more capable Standard SM-2 surface-to-air missile.

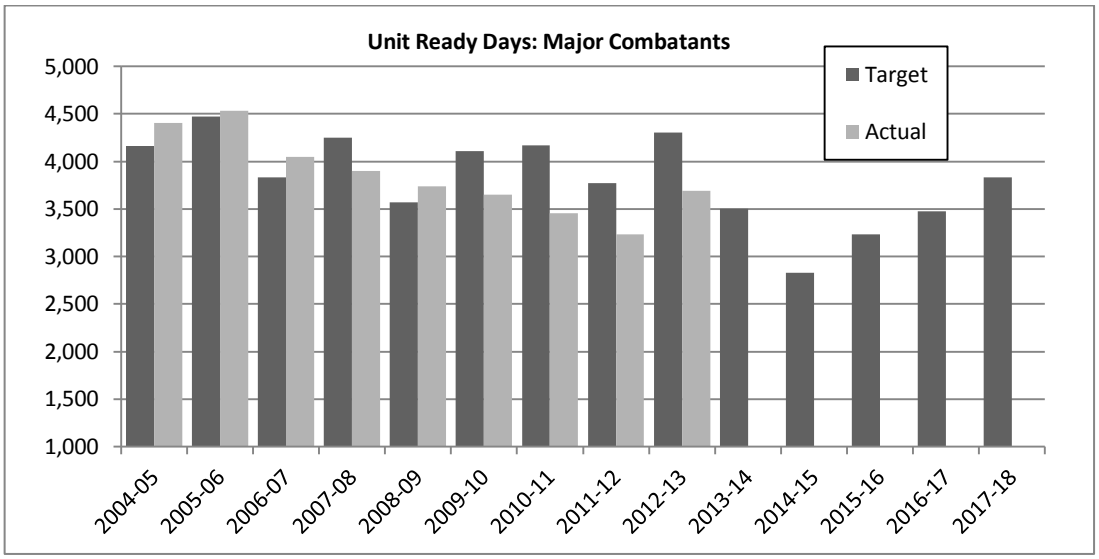
The Anzac class have a 5" gun useful for shore bombardment (as seen in the Gulf in 2003) while the FFG has a less capable 3" gun. Both classes of vessel can embark a Seahawk anti-submarine helicopter, although the recent availability and current capability of these aircraft is less than desired.

Upgrades are underway on both fleets. The FFG have effectively completed the long-delayed $1.4 billion FFG-upgrade project and the FFH are progressively being fitted with a range of new systems including an anti-ship missile defence (ASMD) suite. In addition, three new Air Warfare Destroyers are presently under construction. Two FFG will be withdrawn from service in December 2014 and March 2017 respectively.

Submarines

The RAN has six Collins Class submarines. Their primary roles are to attack enemy shipping and to counter the threat of adversary submarines. In addition, they can collect intelligence and insert and extract Special Forces. The Collins Class is equipped with Harpoon anti-ship missiles and the US Mk 48 heavyweight torpedo.

The delay in the introduction of the Collins Class into service as the Oberon Class left service disrupted both submariner training and the retention of skilled personnel. The resulting shortage of submariners reduced the delivery of capability. Longer than expected maintenance periods coupled with mechanical problems further compromised the availability of boats. Following the Coles review of Collins sustainment, steps have been taken to improve vessel availability with encouraging early success. Moreover, Navy has been successful in growing the numbers of trained submariners.



Minor combatants

Patrol boats

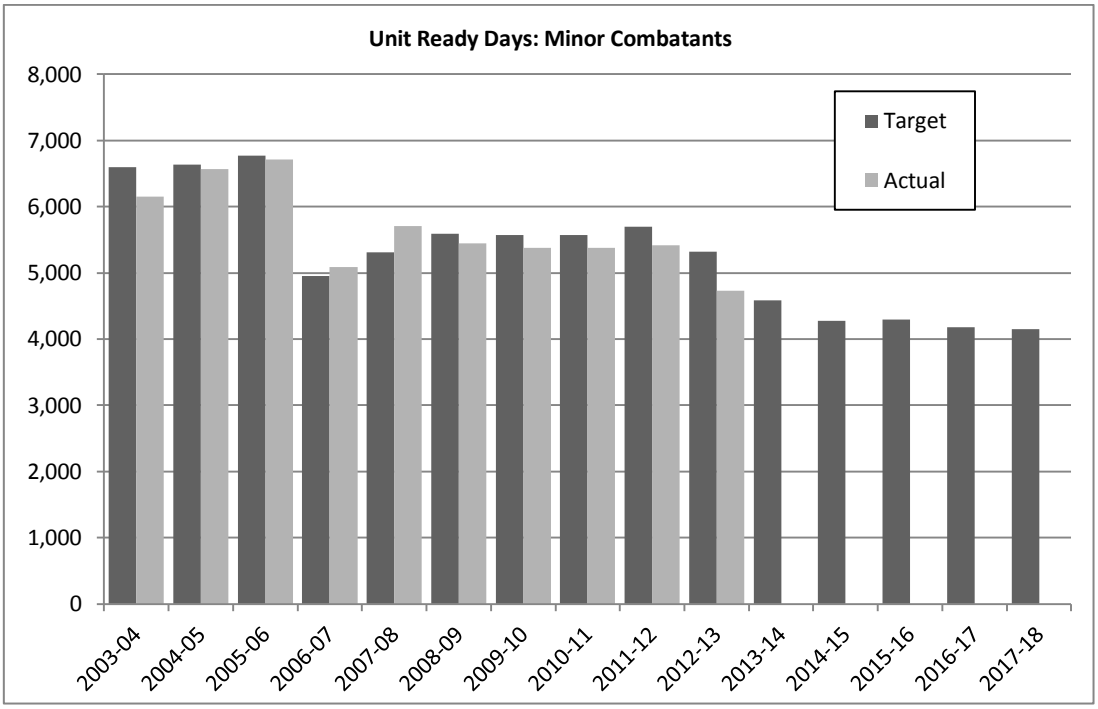
All of Navy's fleet of fifteen 1980s vintage Australian-built, UK-designed, Fremantle Class Patrol Boats (FCPB) have now been replaced by fourteen Armidale Class Patrol Boats (ACPB). These vessels are mainly tasked in support of the civil surveillance program through Border Protection Command. They can also be used for the insertion and extraction of army patrols on the coast, including Special Forces.

Through an innovative program, the Navy multi-crews the Armidale Class vessels, thereby reducing the burden on sailors and their families while maintaining a high utilisation of the assets. At present there are 21 crews spread across 14 vessels. In recent times maintenance issues have challenged the fleet.

Mine warfare vessels

6 Huon Class Coastal Mine Hunters (MHC) – 720 tonnes displacement, glass-reinforced plastic hulled, Italian-designed and built in Australia in the late 1990's. The ships employ sonar to search for mines, which can then be destroyed using a remote controlled mine disposal vehicle or otherwise. There are also two auxiliary minesweepers, but according to the 2010-11 DAR, they were 'placed on *short-term reactive notice for sea* from October 2010 until procurement of a replacement capability is undertaken.' There are also two Clearance Diving Teams, one on each coast at Sydney and Perth, capable of clearing mines and other ordinance, clandestine survey and obstacle clearance, and battle damage repairs.

The health of the RAN minesweeping capability is under question. Training has been interrupted by the use of two of the Huon class vessels for border patrol duties, and since 2009 two of the Huon class have been placed in extended readiness. It's been estimated that it will take five years to get the full fleet operational again.



Amphibious and afloat support

Amphibious lift

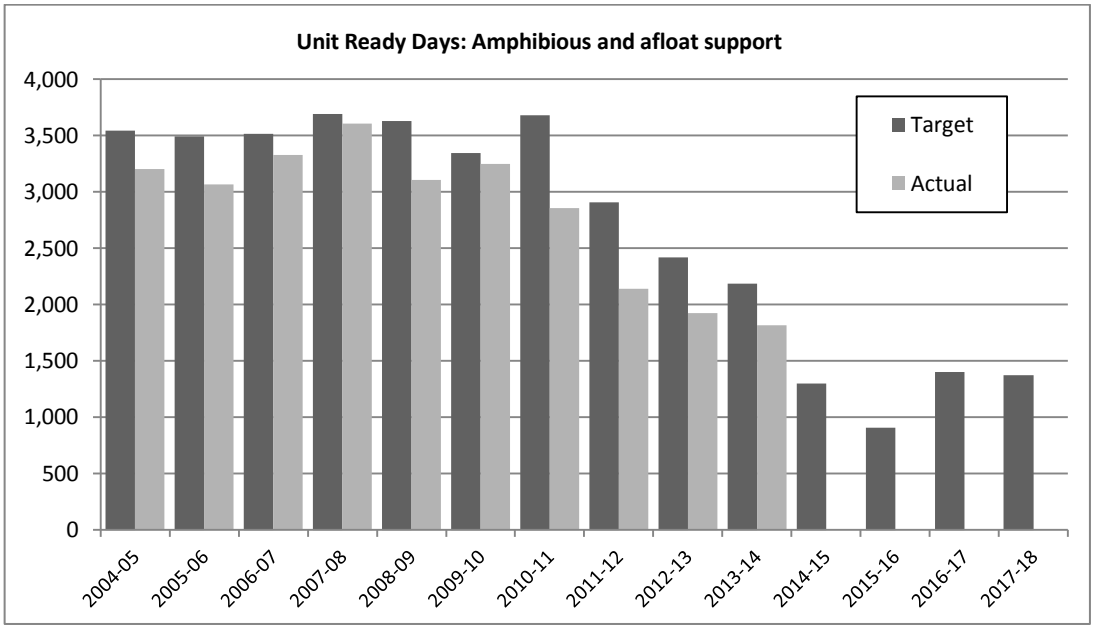
Until 2012, the fleet included two Kanimbla Class Landing Platforms Amphibious (LPA), HMAS *Manoora* and HMAS *Kanimbla,* refurbished in the mid-to-late 1990's from two second-hand 1970's US Newport Class Landing Ship Tank vessels, and one Heavy Landing Ship (HLS), HMAS *Tobruk*, a 1980's UK-designed and Australian-built vessel. In February 2011 the amphibious fleet suffered a critical and unexpected failure of availability and HMAS *Manoora* and HMAS *Kanimbla* were subsequently decommissioned. Amphibious heavy lift capability will be maintained through the recently acquired second-hand vessel from the United Kingdom, HMAS *Choules*. *Tobruk* is planned to be withdrawn from service in December 2014.

Two new large amphibious (Landing Helicopter Dock) vessels are under construction and are due to enter service in the first half of the decade. These vessels will each displace around 27,000 tonnes and carry 1,000 troops plus helicopters and vehicles. Navy also has three Landing Craft Heavy (LCH) due for decommissioning in late 2014.

Afloat support

The afloat support force refuels and re-supplies Navy vessels and embarked helicopters at sea and provides logistics support to land operations. The fleet comprises two vessels: HMAS *Sirius:* a South Korean-built 46,017 tonne full displacement commercial vessel which was refitted to Navy specifications as an Auxiliary Tanker (AO) and HMAS *Success:* a 1980s French-designed, Australian-built 17,900 tonnes full displacement Auxiliary Replenishment Tanker (AOR). Amada Ship Cantabria commenced a year-long deployment with the RAN in 2013.

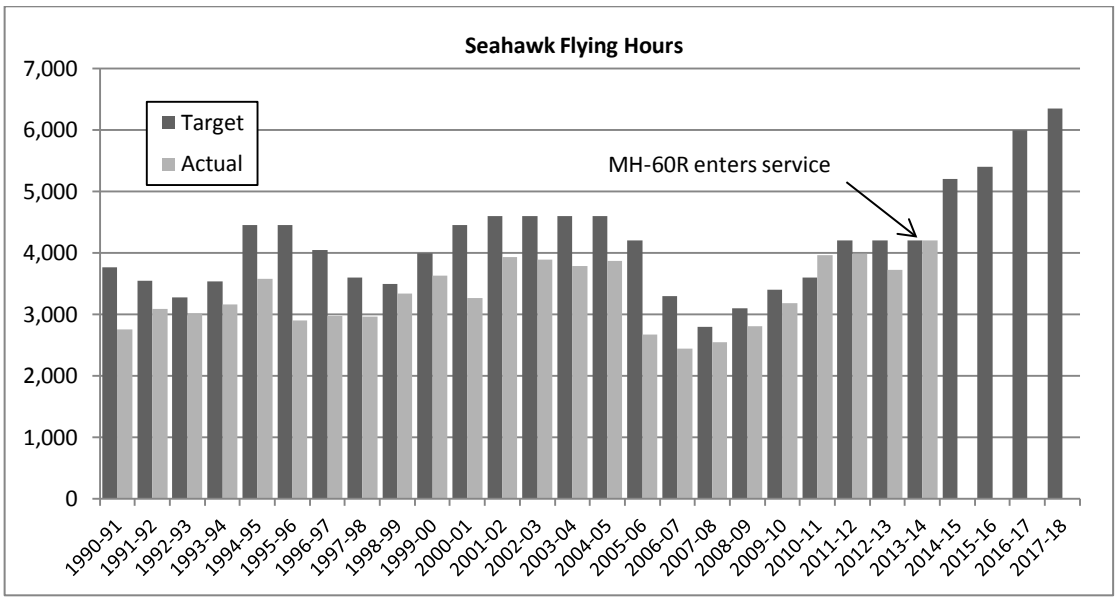
Although HMAS *Sirius* has been touted as an example of how commercial-off-the-shelf equipment can meet ADF requirements quickly and at reduced cost, the ship does not have the full range of capabilities and operational flexibility of a purpose build ship.



Naval aviation

The RAN has sixteen 1980s US-designed Seahawk helicopters that can be embarked on the FFH and FFG class frigates. They are configured for anti-submarine and surface search/targeting. A project to deliver eleven Super-Seasprite helicopters for the Anzac frigates was cancelled in early 2008. New Seahawk MH-60R aircraft are replacing both the Seahawk and the capability sought from the Super-Seasprite from 2014. Six MRH-90 aircraft began transitioning into service in late 2011 as a replacement for the now-retired UK-built Sea King helicopters (reported under Army outputs). Thirteen Squirrel light helicopters are used for training and short-term operations at sea.

Over the past decade, the performance of both the Sea King and Seahawk fleets was compromised by personnel shortages, maintenance issues and ongoing aircraft upgrades and modifications. A fleet of new MH-60R Seahawks will start to enter service beginning in 2014. Scheduled flying hours for the new MH-60R Seahawks are 600 hours in 2013-14 and 2,400 hours in 2014-15.



Hydrographic, meteorological & oceanographic fleet

The Navy produces maritime military geospatial information for the ADF and undertakes hydrographic surveying and charting for civil use. The hydrographic component is supported by the Australian Hydrographic Office in Wollongong, NSW, and also comprises the Hydrographic Office deployable survey unit. The fleet includes:

2 Leeuwin Class Hydrographic Ships (AGHS): 2,250 tonne Australian-built hydrographic ships.

4 Paluma Class Survey Motor Launches (SML)*:* 320 tonne Australian-built survey launches.

1 Laser Airborne Depth Sounder (LADS) aircraft: an airborne depth sounder capability used in shallow water.

Program 1.3 – Army Capabilities

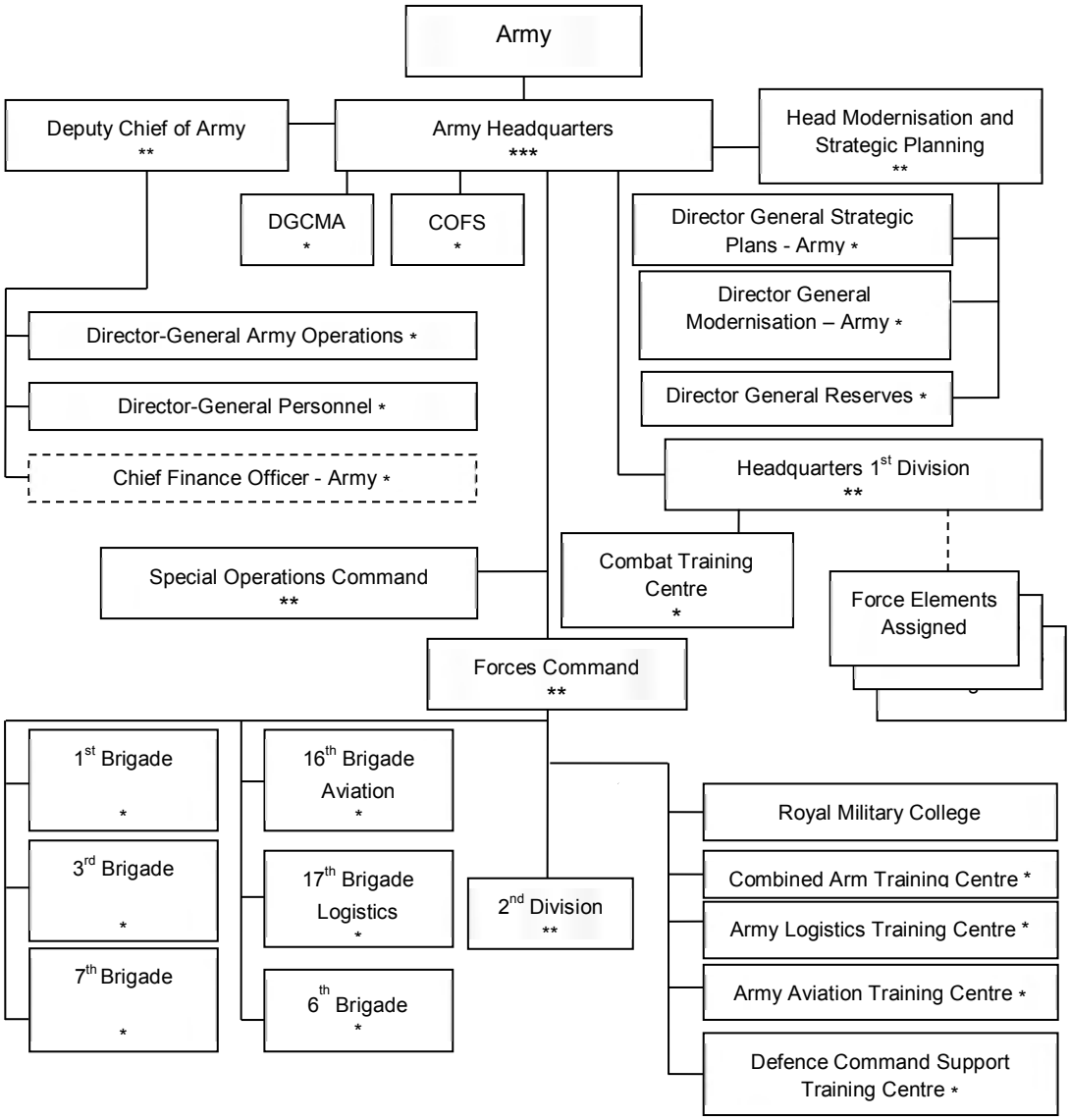
Department outputs 2014-15: $5,986 million

In 2009, the Australian Army was restructured to ensure it is more effective and efficient in its conduct of force generation and force preparation—for current operations and potential operations of the future. The Army was structured around three functional commands. The three functional commands and their roles are as follows:

Special Operations Command commanding Army's Special Forces units.

Forces Command is *responsible* for the force generation of Army individual and collective conventional capabilities based on Foundation Warfighting skills.

1st Division focuses on the force preparation of conventional Army force elements for specified operations and contingencies. It also forms the basis of the Deployable Joint Force Headquarters, capable of providing Command and Control to Australian and coalition forces at short notice.



Headquarters 1st Division

Headquarters 1st Division is based in Brisbane, and prepares and certifies Army conventional force elements, as assigned by Chief of Army, in order to meet the specific operational and contingency requirements directed by Chief Joint Operations.

Headquarters 1st Division also commands a number of specialist units which support its role and prepare and certify forces for operations. These include the 1st Signals Regiment (Brisbane), the Combat Training Centre (Townsville), the 39th Operational Support Battalion (Randwick, Sydney) and the 2nd/30th Training Group (Butterworth, Malaysia).

Special Operations Command

The Special Air Services Regiment (SASR) in Western Australia provides special recovery (including domestic and overseas counter terrorism by the west coast Tactical Assault Group (TAG)), long-range reconnaissance and offensive operations. The 2nd Commando Regiment (2 Cdo Regt) in Sydney (including east coast TAG) and the 1st Commando Regiment (a reserve unit split between Sydney and Melbourne) are the Army's two commando regiments. Commando roles include special recovery and land, sea- and air-borne offensive raids. The 126 Signals Squadron in Sydney provides a Special Forces signals capability to 2 Cdo Regt and 152 Signals Squadron in Perth provides a signals capability to the SASR. There is also a Special Operations Engineer Regiment based in Sydney, a Special Forces Logistics Squadron in Sydney, a Special Forces Training Centre in Sydney and Parachute Training School in Nowra.

Forces Command

1st, 3rd and 7th Brigades

Forces Command includes three combat brigades. Each Brigade contains two Infantry Battalions of the Royal Australian Regiment, and Armoured Cavalry Regiment equipped with M113AS4 armoured personnel carriers and Australian modified ASLAV light armoured vehicles. Each Brigade also contains an Artillery Regiment equipped with towed M777 155mm Lightweight Towed Howitzers. Additionally, each Brigade includes command and control, combat support and combat service support elements based in a Brigade Headquarters, Signals Regiment, Combat Engineer Regiment and Combat Service Support Battalion.

1st Brigade The 1st Brigade is headquartered in Darwin and has units located in both Darwin and Adelaide. The 1st Armoured Regiment is the Brigades Armoured Cavalry Regiment and also currently contains Army's armoured capability, equipped with reconditioned US-made M1A1 Abrams tanks. The 7th Battalion, The Royal Austrlian Regiment is based in Adelaide.

3rd Brigade The 3rd Brigade headquartered in Townsville. In addition to its two standard Infantry Battalions, 3rd Brigade also commands the 2nd Battalion Royal Australian Regiment, which is Army's dedicated unit supporting the ADF Amphibious Capability.

7th Brigade The 7th Brigade is headquartered in Brisbane.

6th Brigade

Headquartered at Victoria Barracks in Sydney, the 6th Brigade commands a diverse collection of units including:

- 1st Intelligence Battalion (Brisbane)
- 16th Air Land Regiment (Woodside SA) equipped with the Swedish RBS 70 shoulder launched, optically guided, surface-to-air missiles, as well as Giraffe sense and warn Agile Multi-Beam (GAMB) radars.
- 20th Surveillance and Target Acquisition Regiment (Brisbane)
- 7th Signals Regiment - Electronic Warfare (Carbalah, Queensland)
- 19th Chief Engineer Works (Sydney)
- 6th Engineer Support Regiment (Brisbane) comprising:
    - 17th Construction Squadron (Sydney)
    - 21st Construction Squadron (Brisbane)
    - 20th Explosive Ordnance Disposal Squadron (Enoggera, Queensland).

17th Brigade

The 17th Brigade, headquartered at Randwick Barracks in Sydney, is a brigade-sized grouping of reserve, integrated and permanent Army units which can sustain a brigade on operations for extended periods while concurrently maintaining a battalion group elsewhere. The Brigade provides supply, fuel, communications, transport (surface vehicle and small watercraft), repair, and health and psychology capabilities. The Brigade is headquartered in Sydney and comprises of the following units:

- 2nd Force Support Battalion (Glenorchy, Tasmania)
- 9th Force Support Battalion (Amberley, Queensland)
- 10th Force Support Battalion (Townsville)
- 1st Close Health Battalion (headquartered in Sydney)
- 2nd General Health Battalion (Brisbane)
- 3rd Health Support Battalion (headquartered in Adelaide)
- 1st Psychology Unit (Sydney).
- 146th Signals Squadron (Sydney)
- 1st Military Police Battalion (Brisbane)

2nd Division

The 2nd Division commands all those Reserve units not integrated into other formations. It is structured around six infantry brigades, each of which has a HQ, two/three infantry battalions, a cavalry unit in some cases, and combat and combat service support units. These brigades are:

- 4th Brigade (Melbourne and Victoria)
- 5th Brigades (Sydney and southern New South Wales)
- 8th Brigade (Sydney and northern New South Wales)
- 9th Brigade (South Australia and Tasmania)
- 11th Brigade (Townsville and Queensland)
- 13th Brigade (southern Western Australia and Perth).

The Division also includes three regional surveillance units predominately manned by reserve personnel. These are:

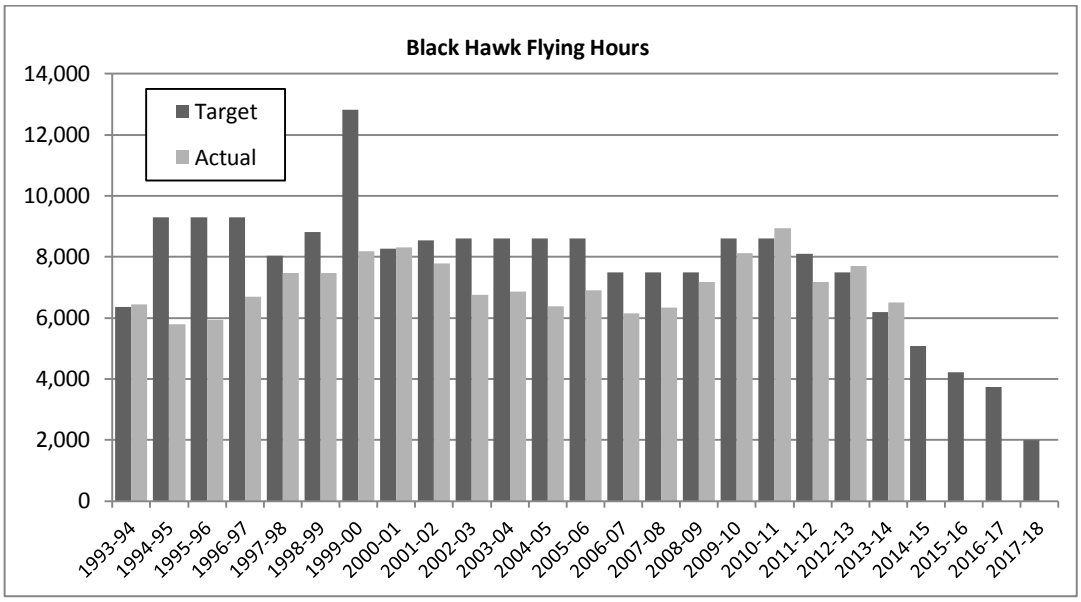
- 51st Battalion Far North Queensland Regiment responsible for conducting reconnaissance and surveillance over 640,000 square km in Far North Queensland and the Gulf country.
- The Pilbara Regiment (Karratha, WA) with 1.3 million square km to cover from the Kimberley boundary in the north, to Shark Bay in the south, then east to the NT/SA/WA border.
- North West Mobile Force (NORFORCE) which covers the Northern Territory and the Kimberly region of northern Western Australia, an area of operations covering nearly one quarter of Australia's land mass—1.8 million square kilometres.

16th Brigade

Army aviation support is generated by 16th Aviation Brigade, headquartered in Brisbane. The Brigade commands the 1st Aviation Regiment (Tiger) in Darwin, the 5th Aviation Regiment (Black Hawk, MRH-90 Taipan and CH-47 Chinook) in Townsville, and the 6th Aviation Regiment (Black Hawk) in Sydney, 16th Aviation Brigade provides the following capability in support of Joint Land Combat and Amphibious Operations: Reconnaissance, Escort, Attack, Airmobile Operations, Aero Medical Evacuation, Combat Service Support, and support to Special Operations.

22 Tiger Armed Reconnaissance Helicopters, and 40 MRH-90 Taipan Troop Lift Helicopters, are being introduced into service with Full Operational Capability expected in 2016 and 2019 respectively, while the Black Hawk fleet will be retired commensurate with MRH-90 introduction. The CH-47D Medium Lift Helicopter fleet is due to be replaced by seven CH-47F Chinooks in the period 2015-2016 under project AIR 9000 Phase 5C.

Assets include: 34 Black Hawk troop-lift helicopters, 41 Kiowa light observation & training helicopters, 6 Chinook medium lift helicopters. All these helicopters are of US design. There are also 22 of an eventual fleet of 24 European-designed Tiger Armed Reconnaissance Helicopters (ARH) and 47 MRH-90 troop-lift helicopters are being progressively brought into service.


Black Hawk Flying Hours
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
Target
Actual
1993-94
1994-95
1995-96
1996-97
1997-98
1998-99
1999-00
2000-01
2001-02
2002-03
2003-04
2004-05
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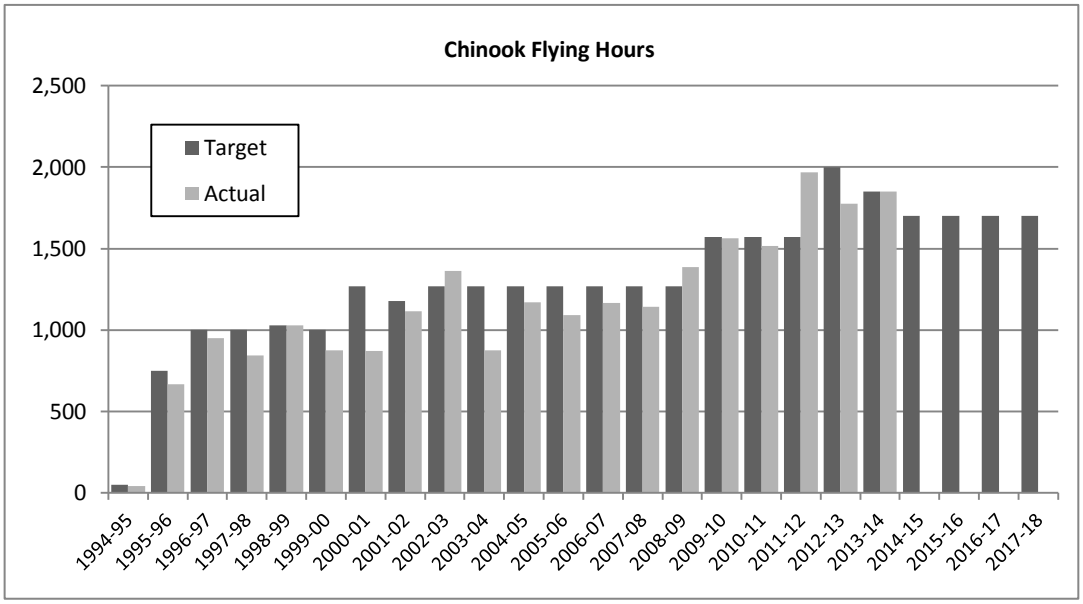
2017-18


Chinook Flying Hours
2,500
2,000
1,500
1,000
500
0
Target
Actual
1994-95
1995-96
1996-97
1997-98
1998-99
1999-00
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
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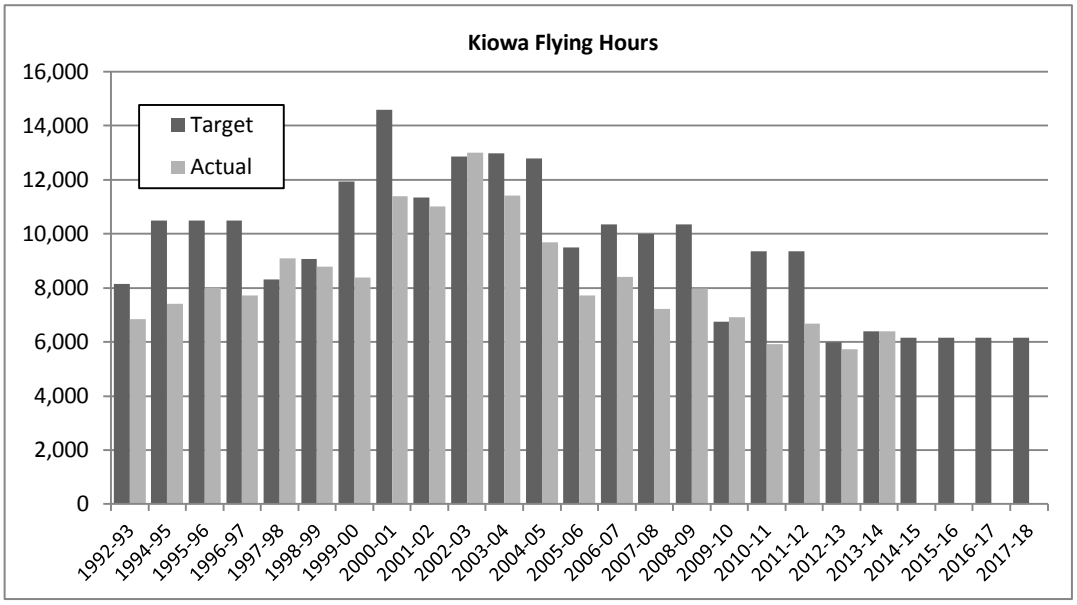
2015-16
2016-17
2017-18


Kiowa Flying Hours
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
Target
Actual
1992-93
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1995-96
1996-97
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1998-99
1999-00
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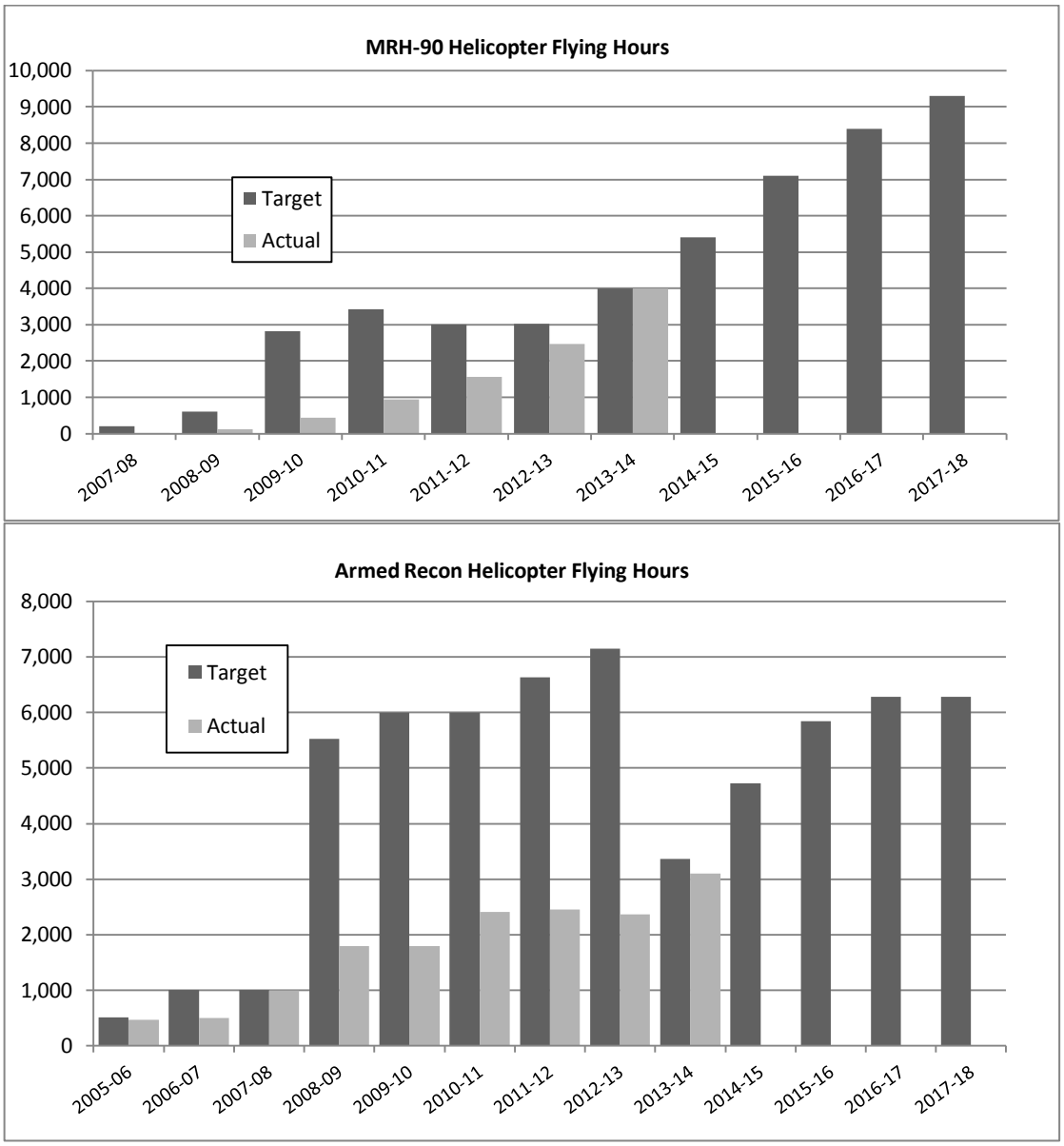
2015-16
2016-17
2017-18



Royal Military College of Australia (RMC-A)

The Royal Military College of Australia is headquartered in Canberra and is responsible for the delivery of individual foundation training for Officers and Soldiers, including the first Appointment Course, Recruit Training and Promotion courses. RMC-A consists of the following units:

- Royal Military College – Duntroon (Canberra)
- Army Recruit Training Centre (Wagga Wagga)
- Land Warfare Centre (Headquartered at Canungra, Queensland with presence in all states and territories).

Army Logistic Training Centre (ALTC)

The Army Logistic Training Centre (ALTC) is principally centred in Albury-Wodonga, however conducts training in Darwin, Townsville, Brisbane, Sydney and Puckapunyal through two training wings and four On-the-Job Training cells. ALTC delivers training in logistics,

ordnance, road and maritime transport, medical, health and electrical and mechanical engineering. ALTC consists of the following schools:

- Army School of Logistics Operations (Albury-Wodonga)
- Army School of Ordnance (Albury-Wodonga)
- Army School of Transport (Albury-Wodonga, Townsville and Puckapunyal)
- Army School of Health (Albury-Wodonga)
- Army School of Electrical and Mechanical Engineers (Albury-Wodonga).

Combined Arms Training Centre (CATC)
The Combined Arms Training Centre is headquartered at Puckapunyal and is the Australian Army's centre of excellence for individual combined arms training. The force structure includes:

- School of Armour (Puckapunyal)
- School of Artillery (Puckapunyal)
- School of Infantry (Singleton)
- School of Military Engineering (Sydney).

Army Aviation Training Centre (AAVNTC)
The Army Aviation Training Centre is located in Oakey and is responsible for the effective instruction of Pilot, Aircrewmen and Groundcrewmen courses as well as the training of Aircraft Technicians for employment within Army Aviation. AAVNTC also contributes to the development of doctrine and materiel plans for Army Aviation. The training centre includes:

- The Army Helicopter School
- The RAEME Aircraft Maintenance School
- The School of Army Aviation.

Defence Command Support Training Centre (DCSTC)
The Defence Command Support Training Centre is headquartered at Simpson Barracks in Melbourne and it is a training formation within Army responsible for the conduct of Intelligence, Signals, Police and Music training, training design and trade management for members of the Australian Defence Force. The training centre also provides training for selected members of the Australian Public Service and nominated students from Defence forces of other nations. DCSTC comprises the following Units:

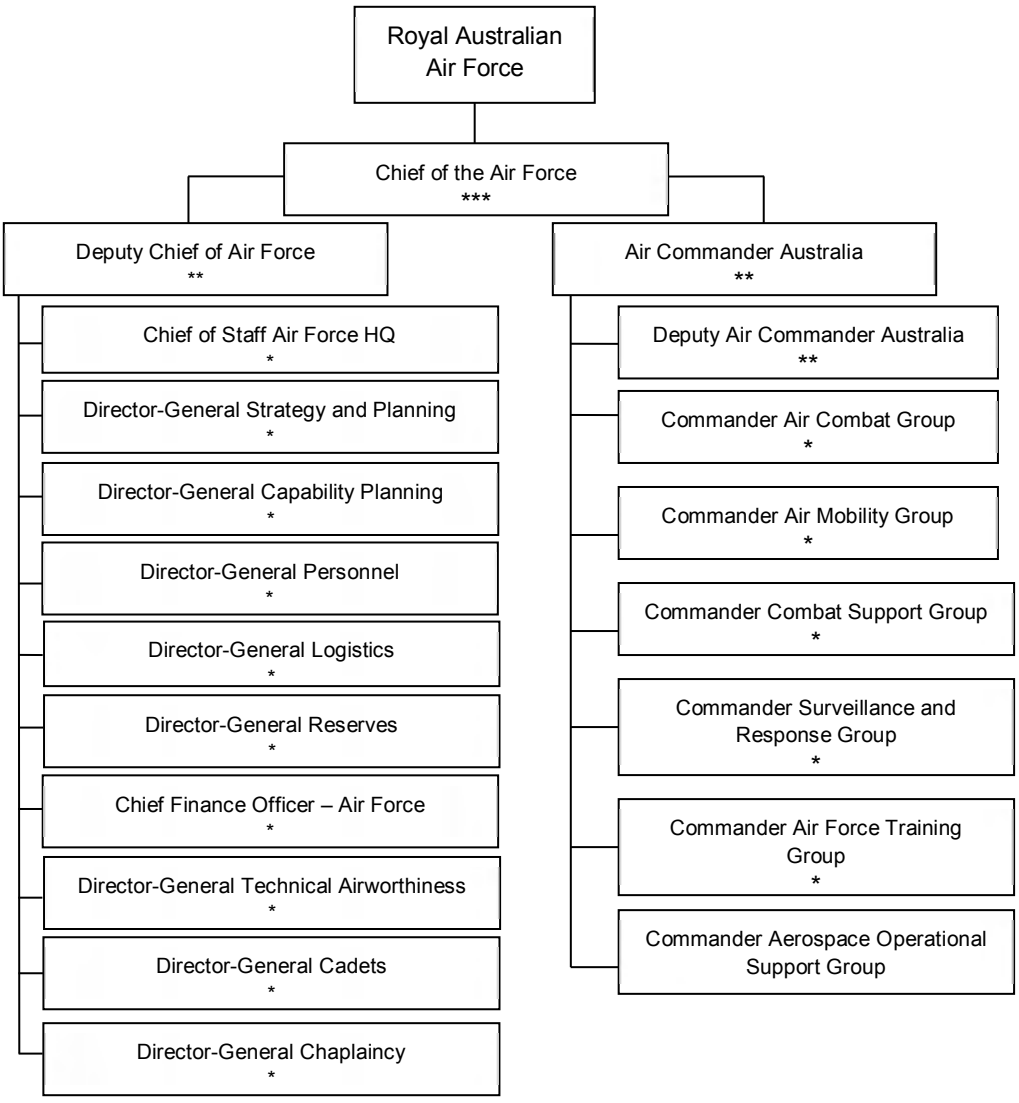
- Defence Intelligence Training Centre (Canungra)
- Defence Force School of Music (Melbourne)
- Defence Force School of Signals (Melbourne)
- Defence Police Training Centre (Sydney).

Program 1.4 – Air Force Capabilities

Department outputs 2014-15: $4,762 million

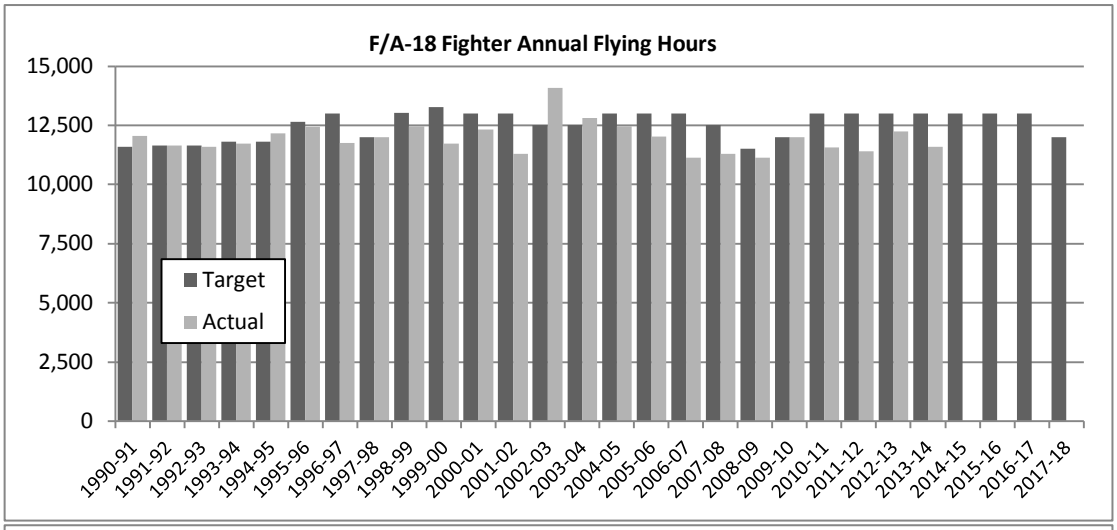
Of the three military services, the Air Force has the leanest and most streamlined organisational structure. The organisation is split into two parts. Corporate planning and administration occurs under the direction of the Deputy Chief of Air Force within Air Force Headquarters while Air Commander Australia takes care of Headquarters Air Command, the Air and Space Operations Centre and the six training, support and flying groups.

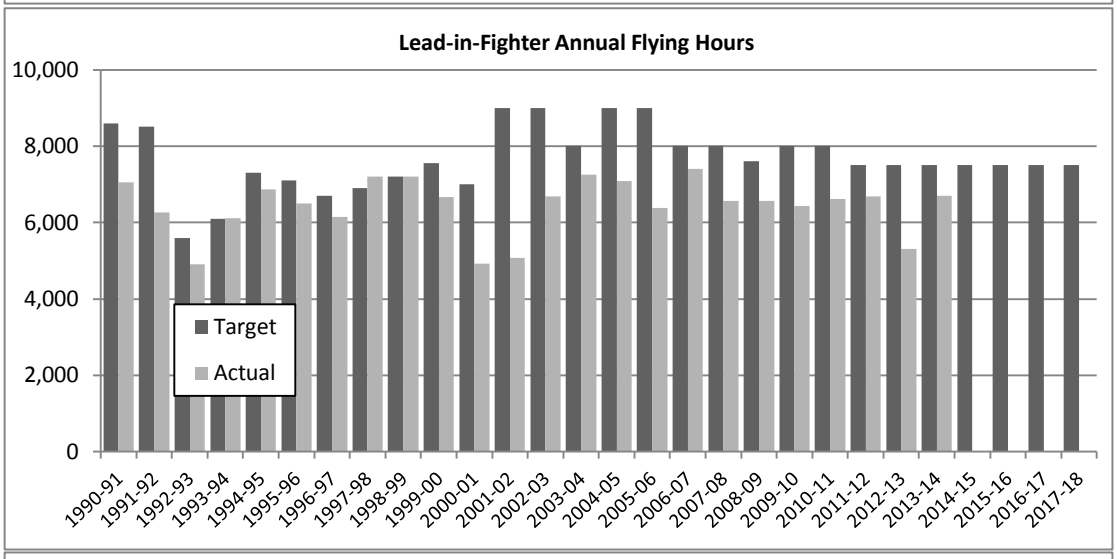
Air Force has recently introduced, or is preparing to introduce, several new fleets of aircraft into service. These include the 6 new Wedgetail Airborne Early Warning and Control Aircraft (AEW&C), 5 replacement Air-to-Air Refuelling (AAR) aircraft, 24 F/A-18F Super Hornet, 10 C-27J Spartan battlefield airlifters, 8 P-8A Poseidon maritime intelligence, surveillance, reconnaissance and response aircraft and 12 E/A-18G Growler electronic warfare and attack aircraft. By the end of the decade, the Air Force plans to be operating F-35A Lightning II Joint Strike Fighter aircraft.

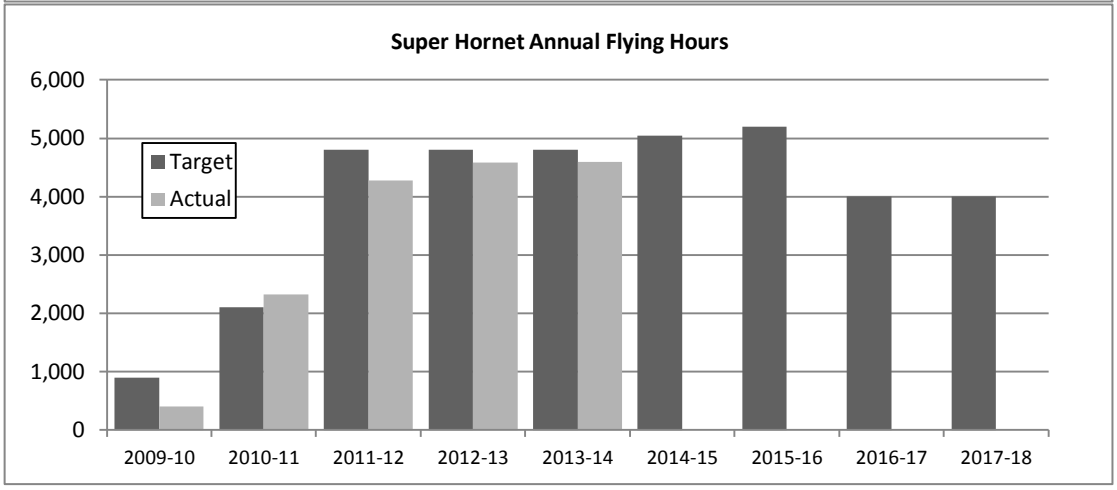


Air Combat Group

Air Combat Group comprises 71 F/A-18 A/B Hornet fighter aircraft and 24 F/A-18F Super Hornets with the remaining 9 Super Hornets expected to be delivered by October 2011. In addition, 33 Hawk Lead-in Fighters (LIF) provide a training capability while 4 PC-9(F) forward air control aircraft are used to designate ground targets and train Joint Terminal Attack Controllers. Air Combat Group also supports and operates the leased Heron Remotely Piloted Aircraft which is deployed to Afghanistan.

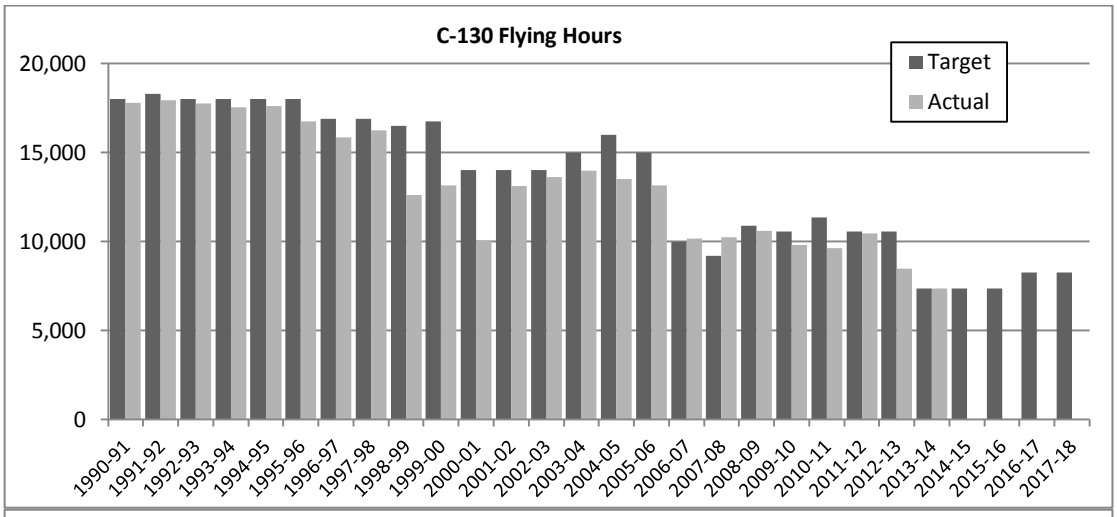


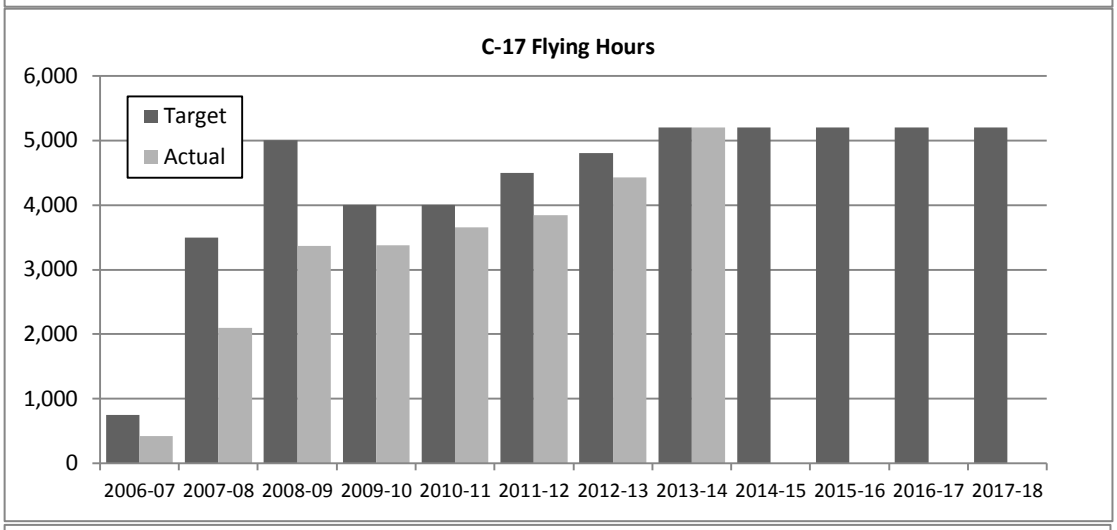


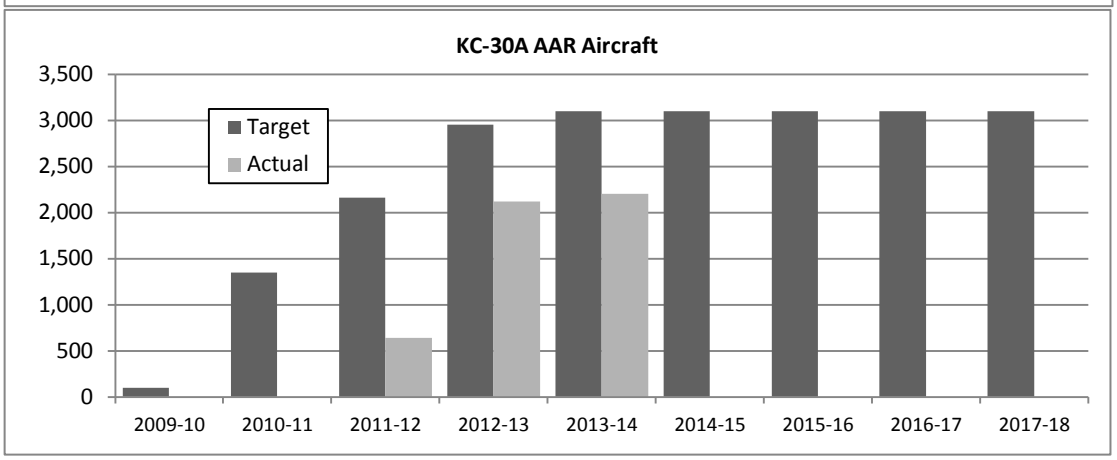


Air Mobility Group

The Air Force has 12 C-130J Hercules and twelve (4 in preservation) C-130H Hercules transport aircraft which are capable of a wide range of strategic and tactical airborne roles. The recent acquisition of 6 Boeing C-17 Globemaster IIIs provides the capability to transport large and heavy loads over long ranges whilst retaining tactical capabilities. Two Boeing 737 BBJ and 3 CL604 Challenger aircraft provide VIP transport for the government. Sixteen B-350 King Air aircraft, provide a light air transport role as an interim capability prior to the introduction of the C-27J Spartan aircraft. Five KC-30A Multi-Role Tanker Transport aircraft perform a duel tanker and transport role.





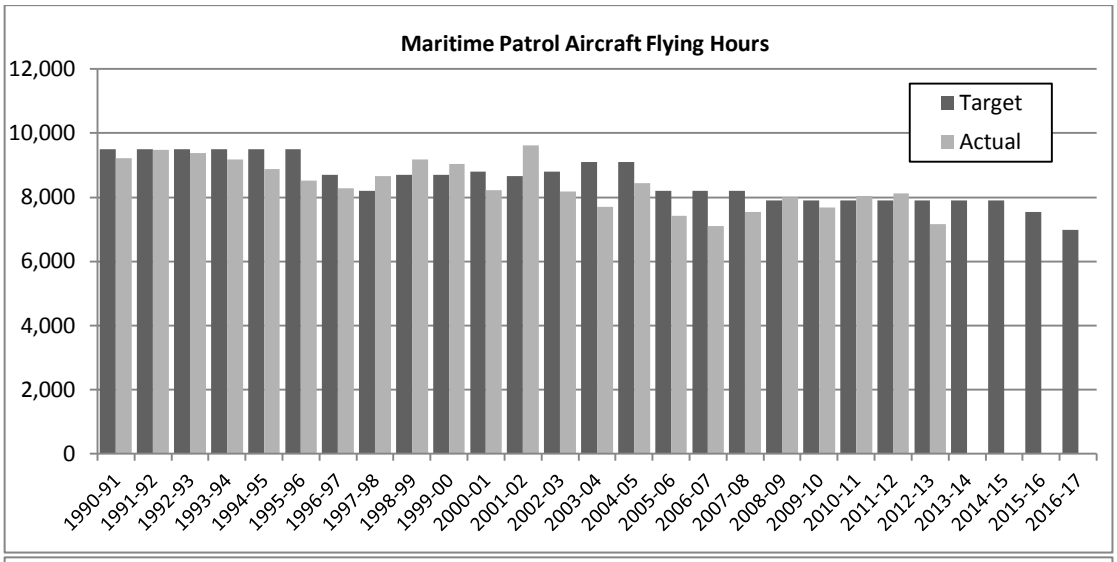


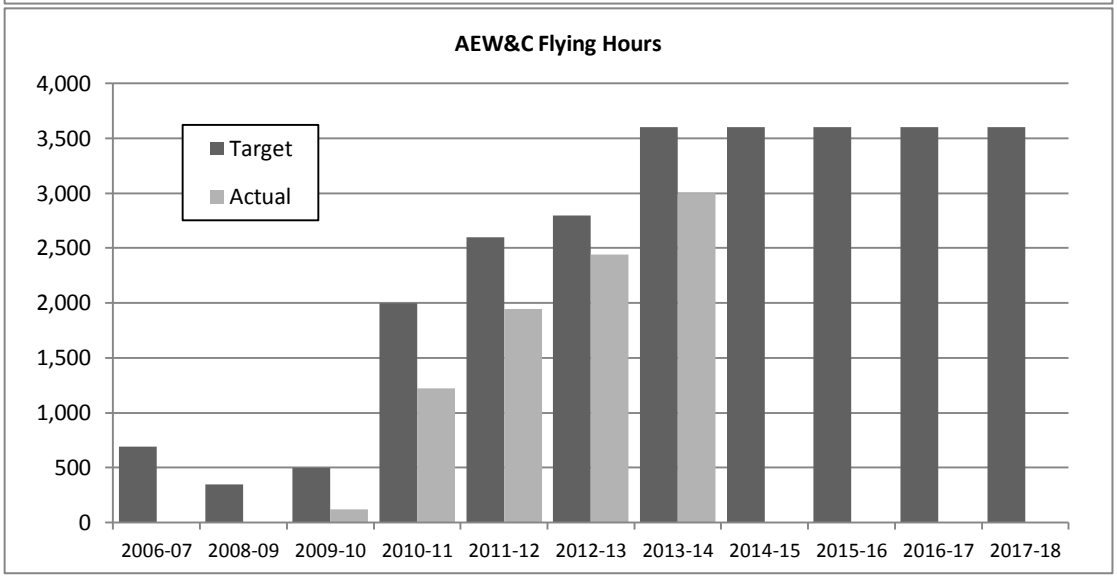
Surveillance and Response Group

The Surveillance and Response Group comprises a diverse range of capabilities including:

Eighteen 1970s vintage AP-3C Orion maritime patrol aircraft which undertake maritime patrol, maritime surveillance, reconnaissance, offensive air support, surface & sub-surface strike, and search and survivor supply. All 18 aircraft have been upgraded to AP-3C standard through an Australian-unique upgrade program.

Ten Air Traffic Radars, including 9 fixed radar and 1 mobile for the control of ADF air traffic. Four Tactical Air Defence Radars: ground based radar to detect hostile and own aircraft. The JORN Over-the-Horizon-Radar network, including radar sites in Laverton WA and Longreach Qld, and 17 coastal beacons in the north of Australia and Christmas Island. The network is run from the Jindalee Operational Radar Network Coordination Centre in Edinburgh, SA, and can detect both sea and air-borne moving objects. The Jindalee facility Alice Springs serves a research and development function. JORN is operated by No. 1 Radar Surveillance Unit. Six Wedgetail AEW&C aircraft based on Boeing 737-700 platform whose entry into service was delayed by more than four years are now flying more regularly with a mature rate of effort planned for 2014-15.





Aerospace Operational Support Group

The Aerospace Operational Support Group provides a broad range of operational and technical support services to Defence in general and Air Force in particular. Key components of the Group include:

Information Warfare Wing which provides electronic warfare, aeronautical information, intelligence and information operation products and services for Air Force air operations and the other Services.

Development and Test Wing which provides flight test, system engineering and aviation medicine products and services for extant and emerging ADF aviation capability.

Woomera Test Range which provides an instrumented weapons test and evaluation range for Defence.

Combat Support Group

The Combat Support Group is the largest of the Air Forces force element groups. The role of Combat Support Group (CSG) is to provide combat support services to all Air Force operational formations and when applicable ADF and Coalition Aviation formations. CSG must be able to deploy a Main Operating Base and two Forward Operating Bases.

The capability for combat support of air operations provides for deployable tactical air base support. It encompasses Bare Base activation including the provision of engineering infrastructure (facilities, water, power and sewerage systems), aircraft arrestor barriers and airfield services, navigation aid and tactical communications, air movement, airfield defence, health support including AME, combat logistics and personnel support capabilities.

CSG provides deployed combat support, excluding aircraft technical maintenance, to ADF contingency air operations at main operating bases, forward operating bases and point of entry airfields in Areas of Operations (AO) either in Australia or overseas. It also provides command and cadre staff for RAAF fixed bases in northern Australia and management of the prepared Bare Bases at RAAF Learmonth (LMO), Curtin (CIN), and Scherger (SGR). The provision of secure airfields and combat support arrangements for the deployment of air assets will continue to be critical to the support of ADF operations.

CSG comprises of a HQ, a Combat Support Coordination Centre, 95 and 96 Wings and a Health Services Wing.

Air Force Training Group

The Air Force Training Group is made up of a headquarters and Air Training Wing, Ground Training Wing, RAAF College and Reserve Training Wing. The headquarters of the Air Training Group is located at RAAF Base Williams – Laverton, Victoria.

Air Training Wing conducts basic and instructor air training for ADF personnel including pilots, air combat officers and air traffic controllers. Basic pilot training employs PC-9/A aircraft while aircraft and navigator training occurs on B350 aircraft. Air Training Wing also includes the RAAF Roulettes, who provide fly pasts and displays, the RAAF Museum and the RAAF Balloon. The Air Training Wing is also responsible for air crew combat survival training.

The RAAF College provides induction and professional military training for the Air Force. The RAAF College also maintains the RAAF Band.

Ground Training Wing provides initial and ongoing training for non-aircrew personnel, including security, fire and ground defence, administration and logistics, technical trades, and explosive ordnance.

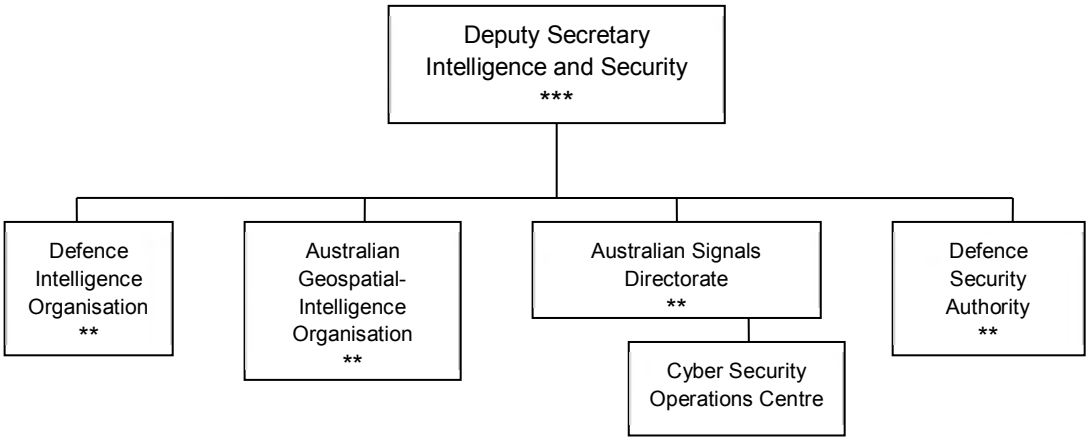
Reserve Training Wing provides ground training to Air Force Reserve members at a number of locations around Australia.

Program 1.5 – Intelligence Capabilities

Department outputs 2014-15: $538 million

Overview

The Intelligence and Security (I&S) Group comprises the Defence Intelligence Organisation, the Australian Geospatial-Intelligence Organisation (AGO), the Australian Signals Directorate (ASD) and the Defence Security Authority. The I&S Group is responsible for the management and oversight of the collection and assessment of intelligence in support of Australia's strategic and national interests, including support to ADF operations. The I&S Group also provides policy and security advice to Government, including security vetting functions for the whole-of-government.



Australian Signals Directorate (ASD) collects and analyses foreign signals intelligence for the Australian Government and the ADF in support of military and strategic decision-making. ASD also provides information security advice and services, predominantly to Commonwealth and state government agencies, as well as working closely with industry to develop and deploy secure cryptographic products. The Cyber Security Operations Centre is also located within ASD headquarters in Canberra.

Australian Geospatial-Intelligence Organisation (AGO) includes HQ at Russell Offices in Canberra and the Geospatial Analysis Centre in Bendigo. AGO obtains and produces geospatial intelligence about the capabilities, intentions or activities of people or organisations outside Australia. It supports ADF operations, targeting and training, as well as Commonwealth and State authorities in carrying out national security functions. AGO also

sets technical standards for imagery and geospatial products, and provides Commonwealth and state authorities, and other bodies approved by the Minister, with non-intelligence products, technical assistance and support to carry out their emergency response functions.

Defence Intelligence Organisation (DIO) at Russell Offices in Canberra provides all-source intelligence assessments focusing on global security trends, foreign military capabilities, transnational terrorism, defence economics, and science and technologies with military applications. DIO produces timely assessments and advice on current and emerging threats to Australia's security and strategic environment in support of Defence and whole-of-government decision-making—including the planning and conduct of ADF operations.

The Defence Security Authority (DSA) is responsible for the developing and promulgating security policy, providing security threat advice, conducting complex security investigations, monitoring Defence's security performance and assisting the Secretary, Chief of Defence Force, Group Heads and Service Chiefs to manage security risks. The Australian Government Security Vetting Agency (AGSVA) is also located within DSA and is responsible for security vetting of personnel across government, except for a small number of exempt agencies, for access to classified information. DSA also manages the Defence Industry Security Program.

Chief Operating Officer – Overview

The Chief Operating Officer (COO) organisation was created as a result of the Black Review of the Defence Accountability Framework. The organisation came into effect on 17 February 2012 and comprises Programs 1.6 Defence Support and Reform, 1.7 Chief Information Officer (CIO) and 1.8 People Strategies and Policy (PSP). The Strategic Reform Management Office (SRMO) and the Ministerial and Executive Coordination and Communication (MECC) Division have also transferred into COO from Program 1.1 Office of the Secretary and CDF, although they are still captured under Program 1.1 in the PBS. Defence Legal now reports directly to the COO rather than through Program 1.6 Defence Support and Reform.

The SRMO is responsible for oversighting strategic reform in Defence.

MECC is responsible for providing support to Ministers and senior Defence leaders in the areas of communication and media, strategic issues management, freedom of Information related matters and the full range of Ministerial support services.

Defence Legal provides legal services and advice to Defence and Ministers in the Defence portfolio.

The responsibilities for Defence Support and Reform, Chief Information Officer, and the People Group are outlined below.

Better integration of these Group outputs will ensure that the development and delivery of corporate services best support Defence's ability to affect the necessary reforms under the Strategic Reform Program. The COO will also be responsible for implementing key parts of the Shared Services Review and achieving cost efficiencies and cultural change that the Government is seeking.

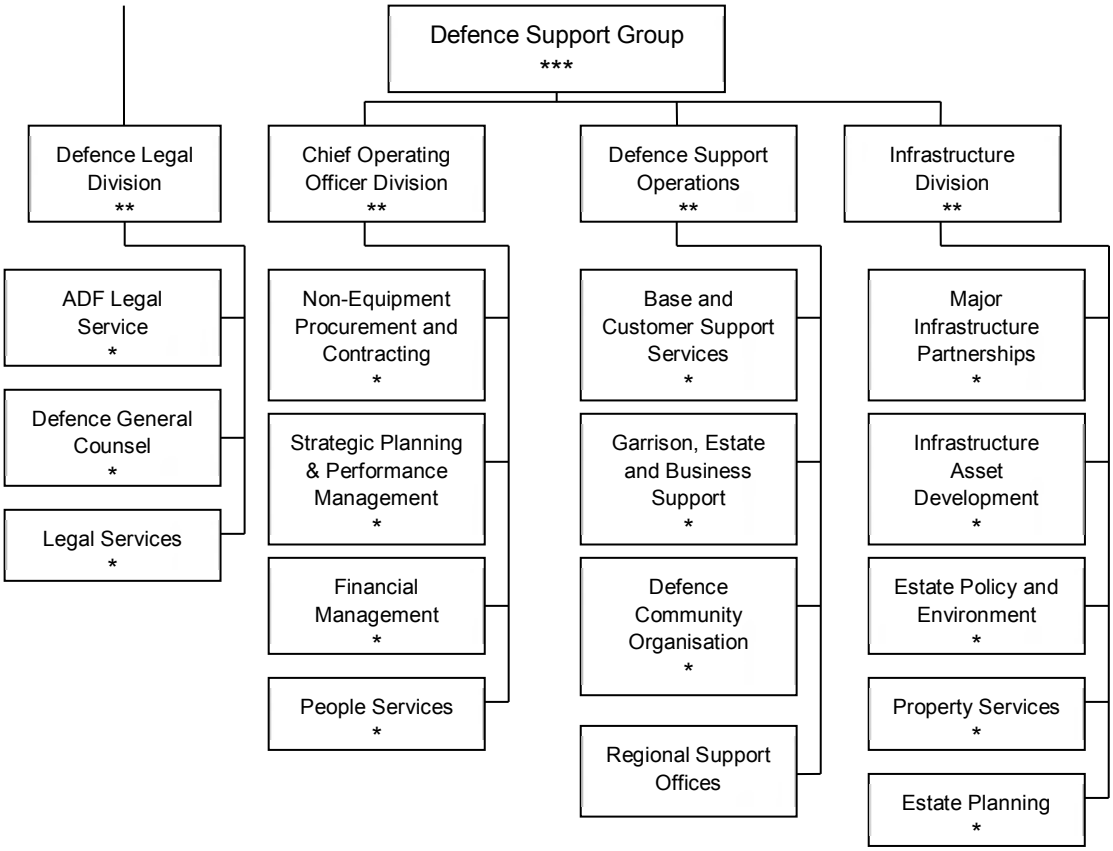
Within the new COO structure, the Defence Support Group will continue to operate and perform its role as a key enabler of Defence's mission and vision. The linkages within the COO organisation will develop the Defence Support Group as part of a single integrated support organisation, providing the backbone of Defence's capability. This will emphasise accountability and responsibility while ensuring services are delivered to clients efficiently and cost effectively.

Work to integrate the programs of the new COO organisation is continuing.

Program 1.6 – Defence Support and Reform

Department outputs 2014-15: $4,086 million

The Defence Support Group provides a range of administrative, garrison, personnel and estate services to Defence. The Group is divided into three divisions. Infrastructure Division plans, builds and upgrades the Defence estate. Defence Support Operations Division provides on-the-ground services and support to Defence personnel throughout Australia including facilities maintenance and garrison support, including grounds maintenance, hospitality, training area management, base security, transport, air support and fire-fighting and rescue services. The Reform and Corporate Services Division is responsible for managing a range of whole-of-Defence shared services including payroll, simple procurement, accounts processing and debt management along with business management, strategic planning and policy support services to the Group.



Program 1.7 – Chief Information Officer

Department outputs 2014-15: $979 million

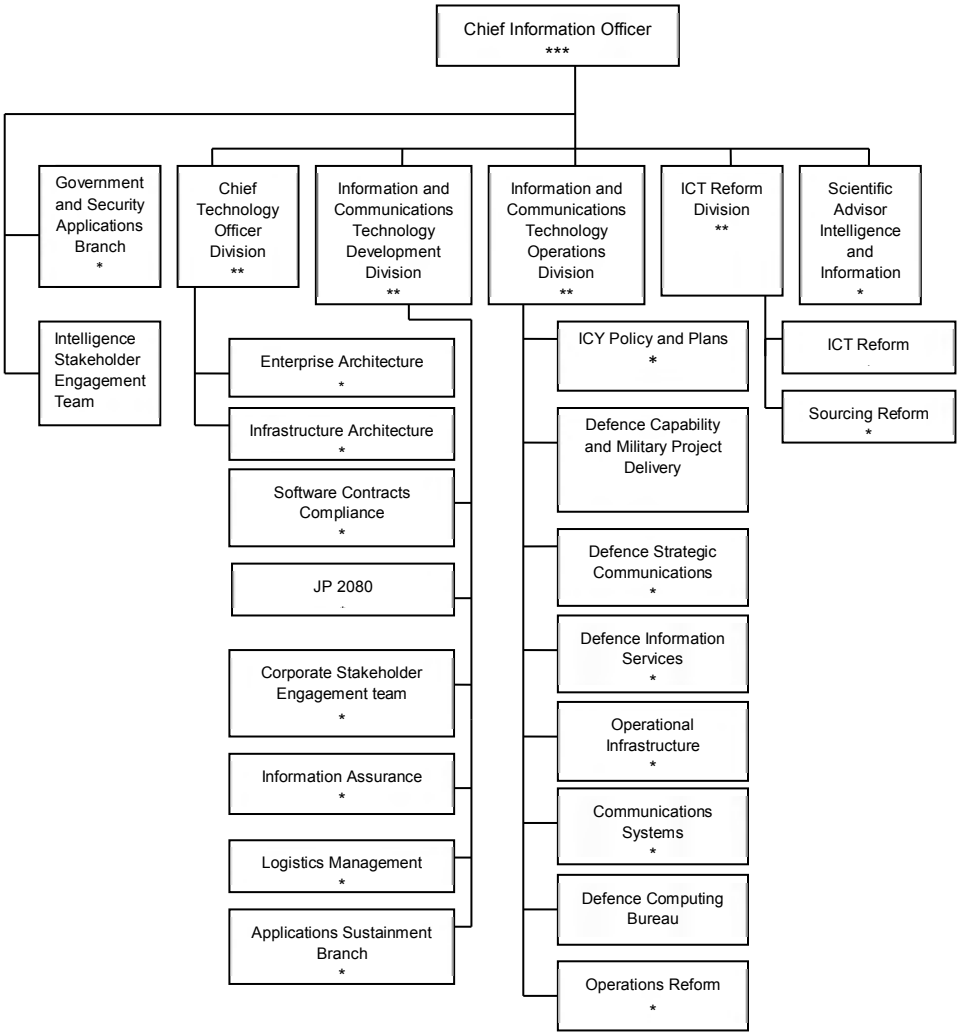
The Chief Information Officer Group is responsible for providing Information and Communications Technology (ICT) to Defence. The bulk of the Group resides in four divisions.

Chief Technology Officer Division develops and documents Defence's ICT architecture, identifies relevant systems and defines ICT standards for Defence.

Information and Communications Technology Development Division designs and develops Software Systems for the Defence information environment.

Information and Communications Technology Operations Division delivers and supports the Defence Information and Communication infrastructure.

Information and Communications Technology Reform Division delivers ICT reform and associated savings across the Defence Portfolio.

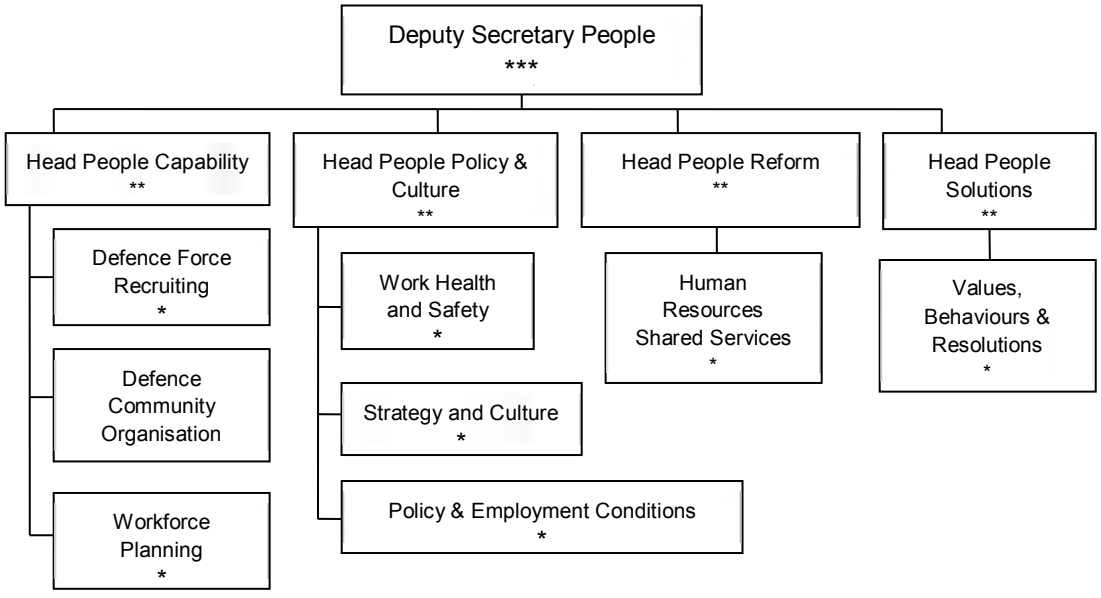


Program 1.8– Defence People

Department outputs 2014-15: $483 million

A new Defence People Group has been in operation since 2012-13 within the Chief Operating Officer Group structure to ensure the effective integration of People functions across the Defence organisation. The new structure is designed to better respond to key People priorities and service the needs of key stakeholders more effectively. The new Defence People Group brings together the former People Strategies & Policy Group and elements of the Defence Support Group, including the Defence Community Organisation, People Services Division, Defence People Solutions and the Directorate of Honours & Awards.

The Defence People Group's key role is the formulation of personnel policy for Defence's workforce. Key priorities for the Group include the provision of a compelling employment offer to assist in attraction and retention, the implementation of *Pathway to Change*—Defence's response to the culture reviews conducted during 2011-12—through the establishment of an Organisational Development Unit, continuation of the human resources reforms identified as part of Defence's strategic reform and the development of tools to enable better decision-making through a better understanding of the Defence workforce and the implications of changes to key drivers of workforce cost.

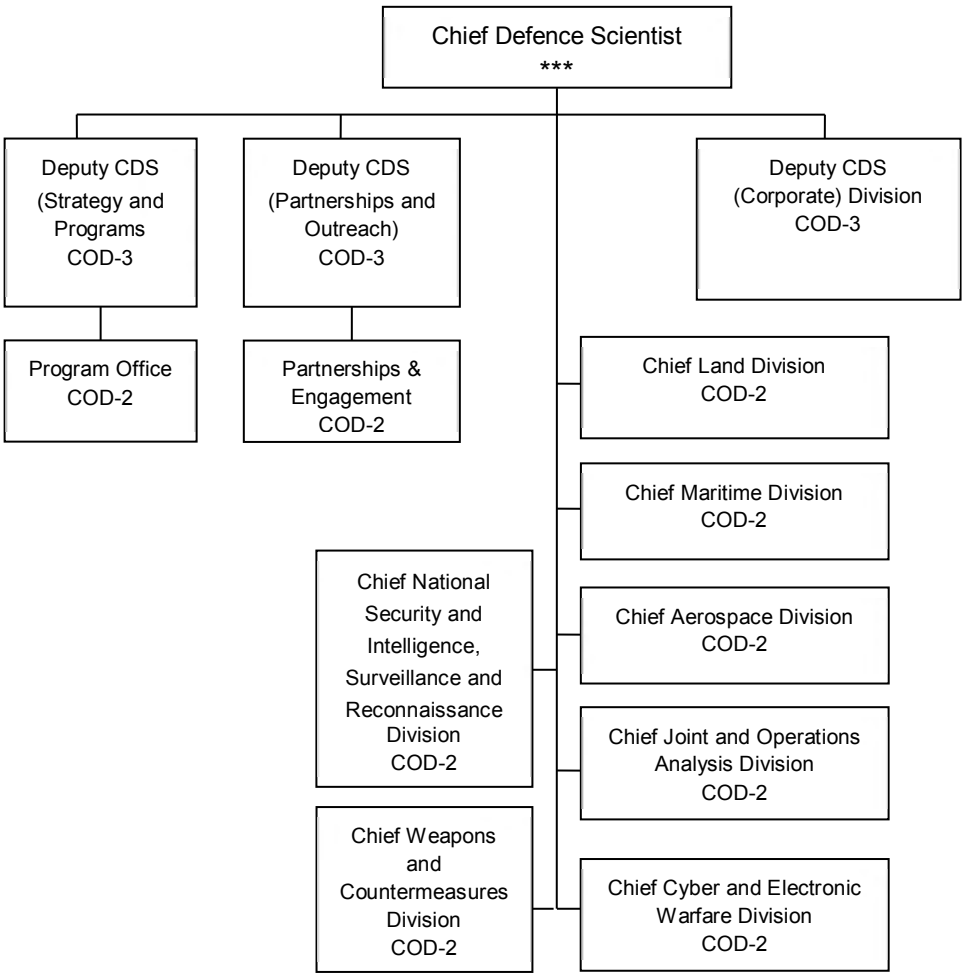


Program 1.9 – Defence Science & Technology

Department outputs 2014-15: $408 million

The Defence Science and Technology Organisation (DSTO) provides scientific advice and innovative technology solutions to the Government, Defence and Australia's national security agencies. This includes supporting operations, sustaining and enhancing current capability, supporting the development and acquisition of future capability and investigating client-focussed future proofing concepts, contexts and capabilities. DSTO also has whole-of-government responsibility for coordinating scientific and technical support to national security.

The organisation is led by the Chief Defence Scientist, who answers to the Secretary and is supported by three deputies. DSTO was restructured in July 2013 in accordance with its Strategic Plan 2013-18 and is reshaping its science and technology capabilities to meet future challenges. The headquarters and one research division are located in Canberra, while remaining research divisions are concentrated in Adelaide and Melbourne. Below the level of Chief of Division, branch level entities in DSTO are led by Research Leaders. Scientific Advisers from the Program Office are outposted to Navy, Army, Air Force, Vice Chief of the Defence Force, Joint Operations Command, Capability Development Group, Defence Materiel Organisation, Intelligence & Security Group and Chief Information Officer Group.



Program 1.10 – Vice Chief of the Defence Force

Department outputs 2014-15: $1,231 million

The Vice Chief of the Defence Force (VCDF) is the military deputy to the CDF. In addition, the VCDF is the Joint Capability Authority as well as being responsible for the following:

Military Strategic Commitments Division provides the strategic level advice and support in the planning and execution of ADF's current operations and future commitments that enables the government to continuously review its national strategic interests. These responsibilities encompass; the strategic coordination of current and future ADF commitments, development and synchronization of strategic communication, the development and review of the nature of service for ADF commitments, and the provision of an investigative service to support the CDF and Service Chiefs.

Joint Logistics Command provides logistics support to the Australian Defence Force including, management of warehouses, maintenance, and distribution facilities.

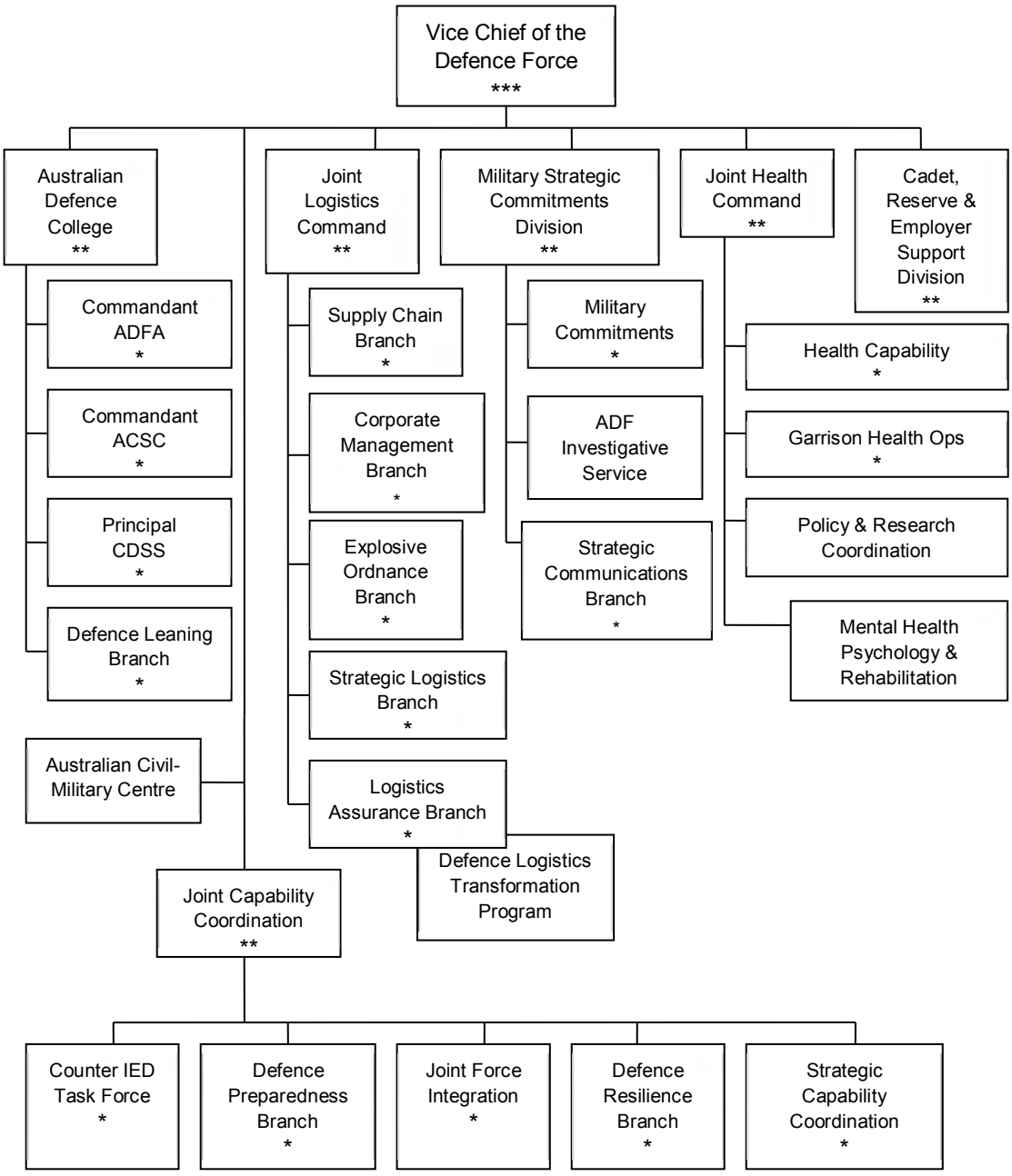
Joint Health Command is responsible for the delivery of all garrison health care to the ADF and exercises technical control through the Surgeon General Australian Defence Force.

Australian Defence College was established to develop the skills and knowledge of Defence's future leaders with an emphasis on joint professional military education and the delivery of joint training programs. Learning is offered through several learning centres providing an education continuum from the Australian Defence Force Academy, to the Australian Command and Staff College and the Centre for Defence and Strategic Studies. Through the Defence Learning Branch, the Australian Defence College also provides strategic direction and coordination for Defence's joint, common and APS training and education.

Joint Capability Coordination supports VCDF as the Joint Capability Authority responsible for ensuring that new and extant capabilities are developed in accordance with joint concepts and doctrine. Core functions of JCCD are to develop and provide the conceptual basis for the future joint force, advise on the state of ADF preparedness to meet Defence output of a prepared Joint Force in Being, and establish interoperability/integration requirements.

Cadet, Reserve and Employer Support Division works to enhance the capacity of Reserves to support ADF capability and provides a governance and accountability framework for the ADF Cadet Scheme.

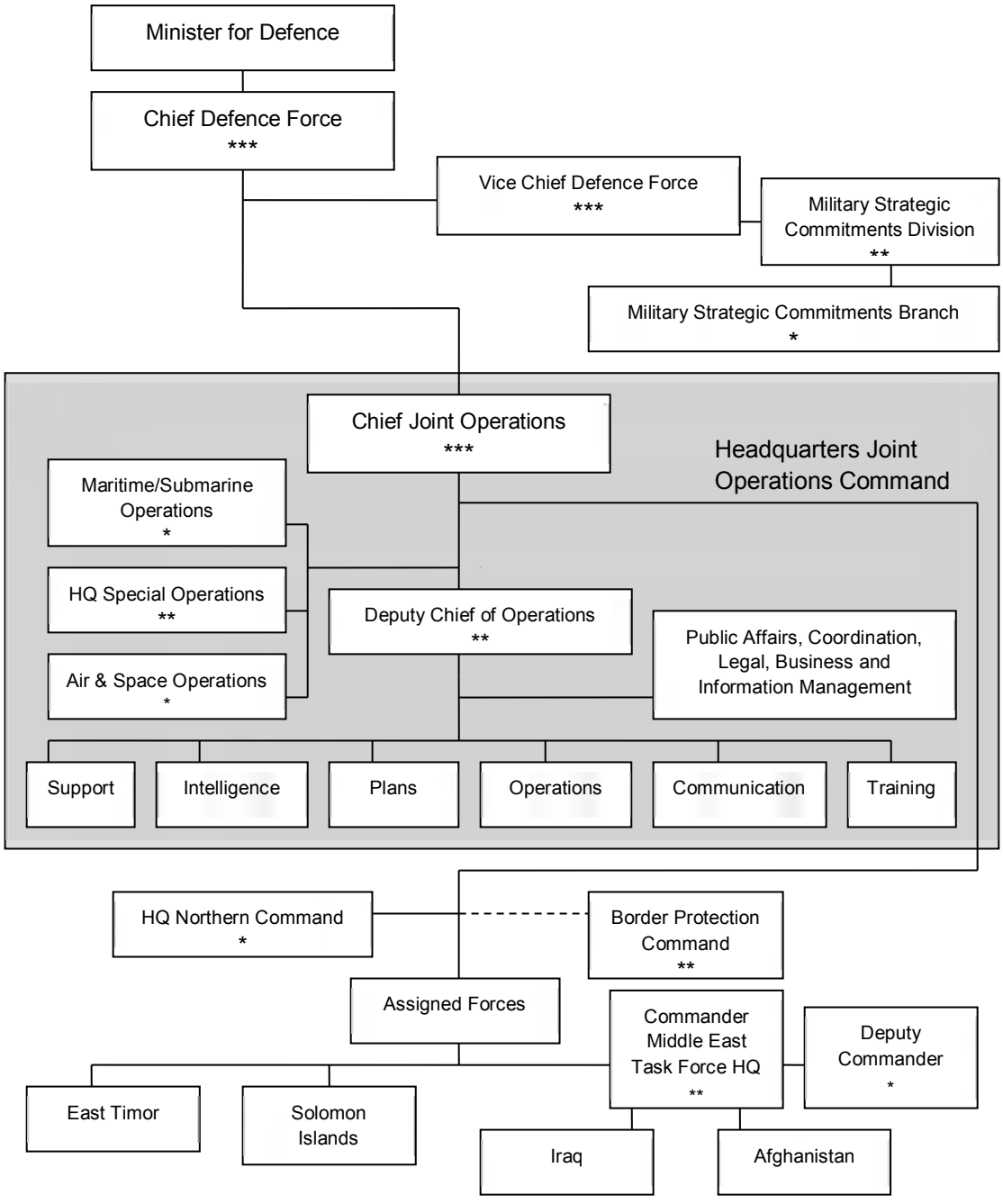
Australian Civil-Military Centre is a whole-of-government initiative to improve Australia's effectiveness in civil-military collaboration for conflict and disaster management overseas.


Vice Chief of the Defence Force ***
Australian Defence College **
Joint Logistics Command **
Military Strategic Commitments Division **
Joint Health Command **
Cadet, Reserve & Employer Support Division **
Commandant ADFA *
Commandant ACSC *
Principal CDSS *
Defence Leaning Branch *
Supply Chain Branch *
Corporate Management Branch *
Explosive Ordnance Branch *
Strategic Logistics Branch *
Logistics Assurance Branch *
Military Commitments *
ADF Investigative Service
Strategic Communications Branch *
Health Capability *
Garrison Health Ops *
Policy & Research Coordination
Mental Health Psychology & Rehabilitation
Australian Civil-Military Centre
Defence Logistics Transformation Program
Joint Capability Coordination **
Counter IED Task Force *
Defence Preparedness Branch *
Joint Force Integration *
Defence Resilience Branch *
Strategic Capability Coordination *

Program 1.11 – Joint Operations Command

Department outputs 2014-15: $52 million

Joint Operations Command (JOC) is responsible for the command of all ADF operations and joint exercises on behalf of the Chief of the Defence Force. Located in a purpose built command facility in Bungendore NSW, JOC is assigned forces for operations from the three Services. The total ADF command arrangement is outlined below. At present, there are approximately 3,300 ADF personnel deployed on operations and somewhere around 750 personnel involved in planning, advising and commanding operations, of which around 750 (including contractors) reside in JOC and SOCOMD.



Program 1.12 – Capability Development

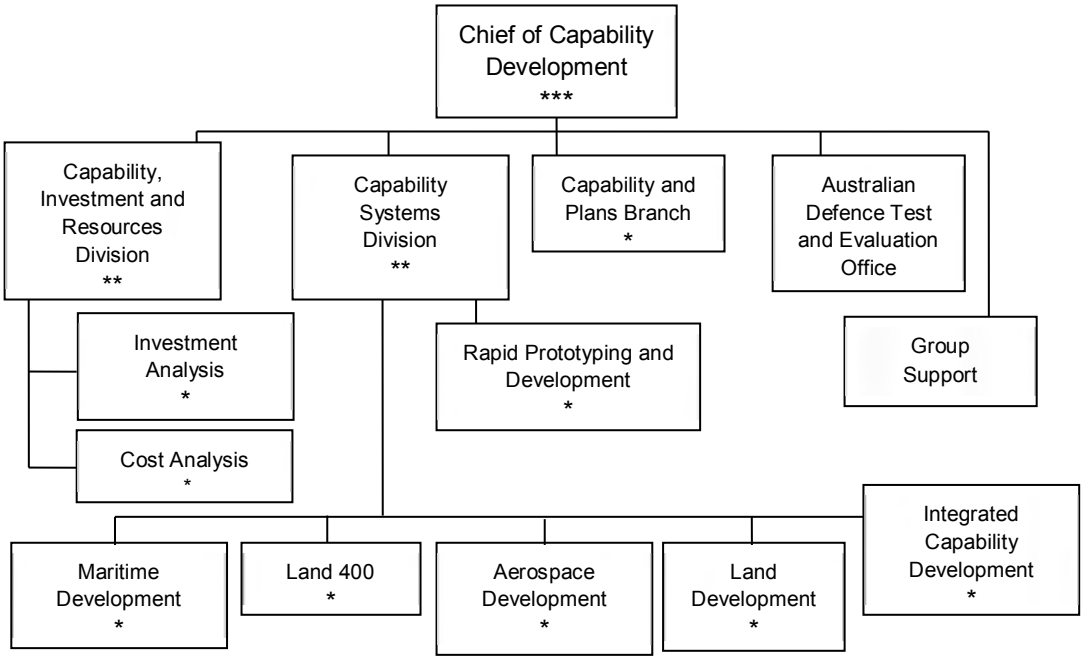
Department outputs 2014-15: $1,423 million

The Capability Development Group develops and manages the Defence Capability Plan (DCP) and prepares Defence capability investment approval proposals for Government consideration. Two divisions, Capability Systems and Capability Investment and Resources, constitute the core of the Group.

Capability Systems Division is largely staffed by military personnel and manages the development of future capability options for Government consideration. It is divided into four branches; three environmentally-based (land, sea and air), and one dealing with integrated capabilities that cross environmental lines. Another element is the Rapid Prototyping Development and Evaluation organisation, which works collaboratively with Australia's defence industry to develop innovative solutions to complex issues affecting capability and current operations.

Capability Investment and Resources Division is largely staffed by civilian personnel and provides independent analysis and contestability of capability proposals as their core function. The Division is responsible for management of the DCP, including conducting the regular review of the capital and Net Personnel and Operating Costs (NPOC) estimates of DCP projects and gaining Government approval for updates to the DCP. It is divided into two core branches; Investment Analysis and Cost Analysis.

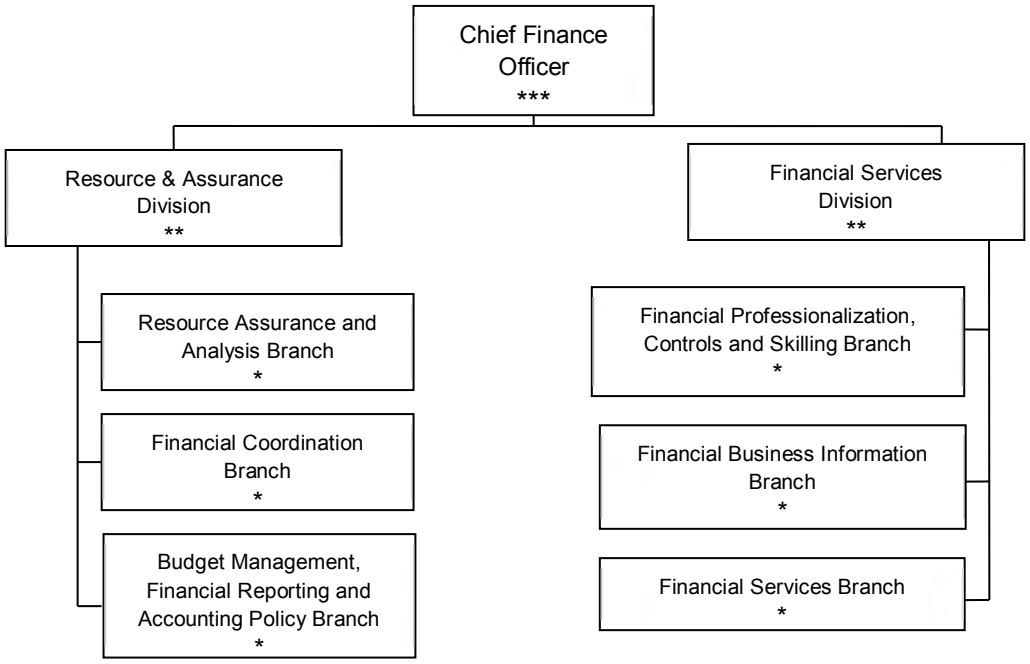
Four other elements within the Group are: the Capability and Plans Branch provides policy services on the capability process, portfolio management office functions and coordinates CDG links to industry and international partners.; the Australian Defence Test and Evaluation Office that provides independent T&E support, trials and demonstrations to Defence throughout the capability systems life cycle; Group Support Branch that provides a range of corporate services across the Group; and an embedded DSTO support cell that links CDG to DSTO services.



Program 1.13 – Chief Finance Officer

Department outputs 2014-15: $557 million

The Chief Finance Officer Group is responsible for Defence's financial planning, budgeting and reporting.



Program 2.1 – Ops in the immediate neighbourhood

Department outputs 2014-15: $3 million

- Op *Gateway*: Indian Ocean and South China Sea maritime patrols (since 1981)
- Op *Solania*: Conduct South West Pacific maritime surveillance patrols (since 1988)
- Op *Render Safe*: Provide enduring explosive ordnance disposal support to the nations of the South West Pacific. (since 2011)

Program 2.2 – Ops supporting wider interests

Department outputs 2014-15: $350 million

- Op *Paladin*: Contribute to the UN Truce Supervisory Mission in the Middle East (since 1956)
- Op *Mazurka*: Contribute to Multinational Force and Observers in the Sinai (since 1982)
- Op *Slipper*: Contribute to ISAF in Afghanistan (since 2001)
- Op *Palate II*: Liaison Officer to UN Mission in Afghanistan (since 2005)
- Op *Aslan*: Contribute to the United Nations mission to the South Sudan (since 2011)
- Op *Accordion*: Provide support to Operations SLIPPER and MANITOU from within the Gulf States. (since 2014)
- Op *Manitou*: Contribute to international maritime security operations in the Middle East Area of Operations (since 2014)

Program 3.1 – National support tasks

Department outputs 2014-15: $68 million

- Op *Resolute*: Contribute to whole-of-government maritime enforcement effort (since 2006)
- Op *G20*: Contribute security assistance to the whole-of-government effort as host of the G20 Summit in 2014.

Defence's contribution to national support tasks ranges from the ongoing routine allocation of Patrol Boat and AP-3C Maritime Patrol Aircraft time, to the allocation of specific capabilities at short notice in a national support emergency. National support tasks include security, ceremonial, civil maritime surveillance, search and rescue, bush fire response and support to the Army / ATSIC community assistance program.

2.7: Budgeted Financial Statements
[PBS Section 3: pp. 81 – 112]

The budgeted financial statements for Defence appear in Section 3 of the PBS. Once again consolidated financial statements for Defence and DMO have been included.

2.8: Defence Materiel Organisation PBS [Defence Materiel Organisation PBS: pp. 134 – 222]

On 1 July 2005 DMO became a prescribed agency under the *Financial Management and Accountability Act 1997*. Since then it has had its own independent part in the Defence portfolio PBS.

Overview

DMO acquires and supports equipment for Defence on a quasi-commercial basis. It is an independent entity from a financial perspective, but administratively is something of an agency within an agency (hence the PBS within a PBS).

Organisational structure

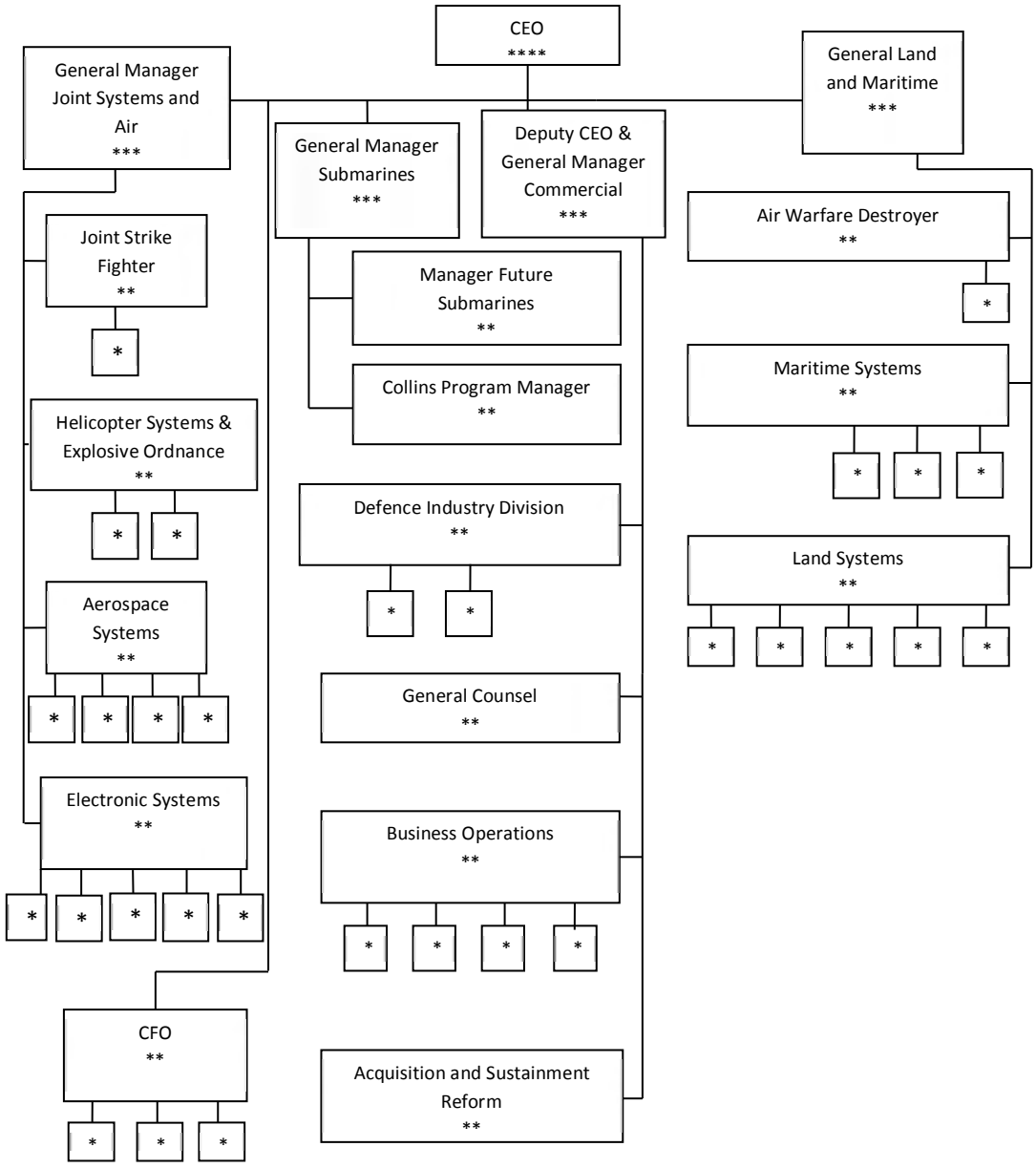
DMO contains fourteen divisions (or similar), each headed by a band-2 SES civilian or 2-star military officer, as shown in Figure 2.8.1. Four deputy-secretary level General Managers oversee the clusters of divisions. The divisions fall into three categories:

Systems divisions are set up on the traditional environmental domains of land, sea, and air, plus divisions dealing with helicopters and electronics. They manage and deliver the vast bulk of the 180 major equipment acquisition projects (and more than 70 minor acquisition projects) that DMO is responsible for, and take care of the materiel support of existing capabilities—some 110 major fleet groupings—across all domains.

Programs divisions acquire high profile capabilities of strategic significance. That is, if a project is big, important (and politically sensitive) enough it gets its own dedicated division. At the moment there are four such programs: Air Warfare Destroyer, Collins, New Air Combat Capability (Joint Strike Fighter) and Future Submarine project. There was an Australian Shipbuilding Industry Planning division but it no longer appears to be in operation.

Three *'Commercial'* divisions provide enabling services and take care of specific areas. These are: Business Operations, General Counsel (legal) and Defence Industry. There is also a DMO Reform division. One final division reports directly to the CEO; that of the Chief Finance Officer—DMO.

Figure 2.8.1 DMO organisational structure



Source: 2014-15 PBS

A prescribed agency

The September 2003 report from the Defence Procurement Review (known usually as the Kinnaird Review) recommended a number of changes to Defence and DMO. Key among them was to establish DMO as a separate executive agency. After consideration, the government decided to take the lesser step of making DMO a 'prescribed agency', which delivers a high degree of financial autonomy but does not provide the level of accountability or transparency intended by the Kinnaird or subsequent Mortimer reviews.

As a prescribed agency, the CEO of DMO is accountable directly to the Minister for Defence for financial matters, hence the need for separate financial statements and budgets. On other matters, DMO still remains close to Defence from an administrative perspective; the

CEO being accountable to the Chief of the Defence Force through the *Defence Act 1903* and to the Secretary through the *Public Service Act 1999*. In practice, DMO does not enjoy the level of independence accorded some other prescribed agencies, such as the Office of National Assessments in the Department of Prime Minister and Cabinet.

Resources for 2014-15

DMO will incur expenses of $12.6 billion in 2014-15. Sources of funding to cover these expenses include:

Departmental Appropriation from government to pay for policy advice and management services. In 2014-15, this will be $881 million.

Revenues from Defence in payment for acquisition and sustainment services from Defence. In 2014-15 this totals $11,664 million.

Accumulation in special account: $4 million of funds will accumulate in the DMO special account as a result of the increase in employee provisions and payables.

Non-appropriation receipts including things such as payments from foreign forces for materiel services provided. In 2014-15 this will amount to $60 million, and this would be called own-source revenues in Defence.

DMO presents its resourcing in accord with Department of Finance guidelines, but differently to Defence. Table 77 on page 137 of the PBS contains the essential information of the sources of funds used by DMO. Table 2.8.1 summarises the situation taking account of movements in the DMO special account. The difference between funding and expenses comes from comparing cash funding with accrual expenses.

Table 2.8.1: DMO funding 2014-15

Funding available to be spent ($ '000s)		
Receipts from Department of Defence	11,644,460	Table 77, p. 137
Departmental Appropriation	881,031	Table 77, p. 137
Accumulation in special account	-4,088	Table 92, p. 195
Non-appropriation receipts	60,525	Table 77, p. 137
Total	**12,581,928**	
Total Price of DMO Outcome	**12,580,096**	Figure 5, p. 141
Difference	1,832	
Expenses not requiring funding	33,717	Table 82, p. 145
Funding surplus	**35,543**	

Source: 2014-15 PBS

DMO Special Account

Unspent funds have both accumulated and have been paid out in subsequent years in the DMO Special Account. Table 2.8.2 calculates the net money deposited and withdrawn from the account since 2005-06. Note that on two occasions the closing balance for one year does not equal the opening balance for the subsequent year as a result of restatement of balances. Where possible, explanations are provided for the difference in the accompanying notes.

With total cash flow anywhere in the order of $10 billion from year to year, an element of working capital would be expected to be seen in closing balances. Indeed a quick estimate of rule of thumb working capital in the order of 30 days cash flow could potentially see balances in the order of $830 million. Of course this level of working capital is not required as Defence prepay DMO up front at the start of each financial year for work to be delivered in that financial year.

Any underspends in DMO activity for Defence may result in accumulated funding within the Special Account, along with the accumulation of prior year surpluses for workforce or Industry initiatives. An element of the Special Account balance will also represent cash required to meet invoices received by 30 June but not yet paid until the following financial year. Given that the DMO spends, on average around $51 million on any given working day, the scale of Special Account is unsurprising. The balance of the DMO Special Account remains with the overall Commonwealth Official Public Account.

Table 2.8.2: DMO Special Account movements ($ '000s)

	2005-06	2006-07	2007-08	2008-09	2009-10[1]	2010-11[2]	2011-12[3]	2012-13	2013-14	2014-15
Opening balance	0	190,785	564,819	987,862	320,135	288,091	436,932	326,647	247,136	250,203
Closing Balance	190,785	564,819	987,862	269,296	501,559	436,932	326,647	247,136	250,203	254,291
Represented by:										
Cash in OPA	167,205	542,852	955,743	223,484	409,120	507,424	301,925	111,331	120,203	124,291
Cash held by DMO	23,580	21,967	32,119	45,812	92,439	-70,492	24,722	135,805	130,000	130,000
Total Closing Balance	190,785	564,819	987,862	269,296	501,559	436,932	326,647	247,136	250,203	254,291
Change	190,785	374,034	423,043	-718,566	181,424	148,841	-110,285	-79,511	3,067	4,088

Source: Financial Years 2005-06 to 2009-10 Annual Report, 2010-11 onwards PBS and advice from DMO

(1) In 2009-10 DMO recognised overseas bank accounts as part of cash and cash equivalents. This increased the opening balance by $50.839m

(2) In the 2011-12 DMO Financial Statements, the 2010-11 Special Account balances have been restated. This is due to the following adjustments: (a) an adjustment to remove GST that is recoverable from/payable to the ATO; and (b) a reclassification of payment clearing accounts from Suppliers Payable to Cash and payments made to suppliers, which reduced the closing balance of the Special Account Cash by $213m.

(3) Closing balance reduction in 2011-12 primarily relates to a non-current receivable from the Department of Defence $105m to be paid in later years.

Purchaser-provider arrangements

Central to the resourcing framework for DMO are purchaser-provider arrangements with Defence for acquisition and sustainment services. In 2014-15, DMO will receive an estimated $6,016 million through *Materiel Acquisition Agreements* with Defence, and another estimated $5,649 million through *Materiel Sustainment Agreements*. In addition, there are several *Shared Services Agreements* (for which no payment is made) that cover such services as payroll, accommodation, and banking services provided by Defence, and contracting policy and advice provided by the DMO.

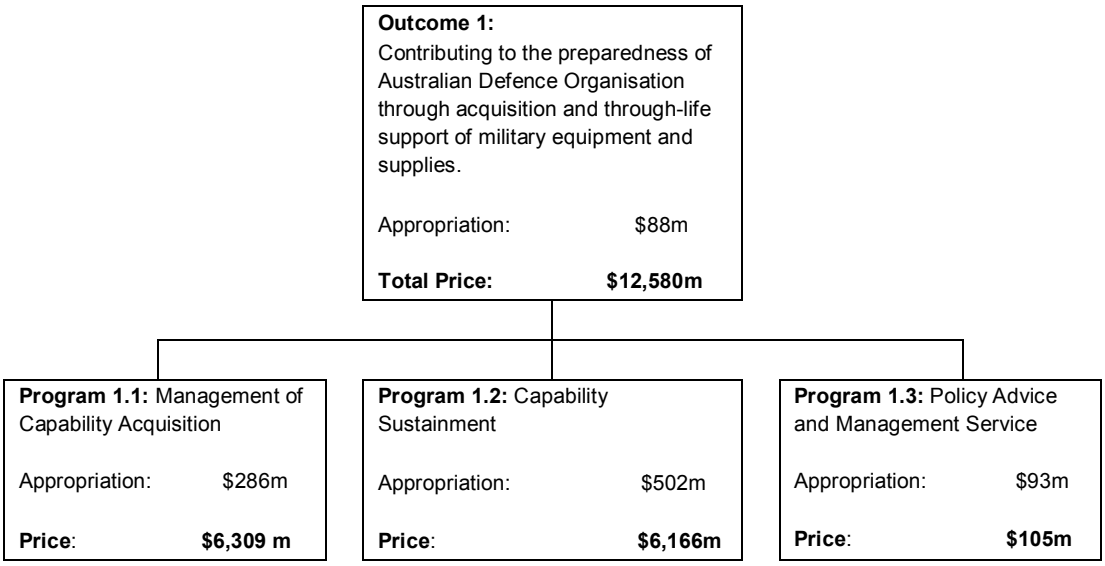
In 2014-15, DMO will make use of 1,347 permanent and an unknown number of Reserve military personnel whose salaries and other personnel expenses are counted in Defence's financial statements. DMO pays Defence for the services provided by these personnel, as a suppliers expense (rather like payments made to companies for contractor staff). In 2014-15 DMO will pay $273 million to Defence for military personnel and other costs covered by the Defence-DMO Service Level Agreement.

Outcomes and programs

As a prescribed agency DMO has its own outcome/program structure as detailed in Figure 2.8.2.

The first two programs are predominantly funded through the Materiel Acquisition and Sustainment Agreements with Defence, while the third is mainly funded through direct Departmental Appropriation from government.

Figure 2.8.2 Contributions to DMO Outcomes and Programs 2014-15



Source: 2014-15 PBS

Outcome and planned performance

The PBS sets the strategy for achieving its outcome on page 142 of the PBS, including actions to be taken within each of its three programmes. The broad purpose and composition of the three programmes are as follows

Management of Capability Acquisition – Program 1.1

Each of the major acquisition projects undertaken by DMO has a Materiel Acquisition Agreement with Defence that specifies scope, schedule and budget. The PBS summarises the top 30 acquisition projects by expenditure in 2014-15 (see top 30 projects below). Agreements also exist to cover the minor acquisition projects DMO manages.

Capability Sustainment – Program 1.2

The PBS details the goals and challenges for 2014-15 in the area of capability sustainment. Such detail, which was first provided in the 2005-06 PBS, gives a useful insight into the range of activities undertaken. In general, capability sustainment includes repair and maintenance, engineering, supply, configuration management and disposal, as well as the provision of spares, technical data, support and test equipment, training equipment and explosive ordnance. The top 30 sustainment products by weapons system appear in the PBS, see below.

Policy Advice and Management Service – Program 1.3

This includes contracting and procurement policy advice for Defence and the DMO, industry policy and advice to Defence and the government, and corporate reporting requirements. Key performance targets for this output are given on page 193 to 194 of the PBS and relate primarily to advice to government and effective corporate governance and reporting.

Table 2.8.3: DMO programme objectives performance indicators

Program	Objective	Performance Indicators
Program 1.1 Management of Capability Acquisition	Acquisition projects will be delivered in accordance with approved parameters and in a transparent and accountable manner.	Broadly, to deliver major and minor capital equipment within the agreed parameters for schedule, scope and budget. The indicators vary with each project and are specified in the Materiel Acquisition Agreements. The DMO reports to its customers against these.
Program 1.2 Capability Sustainment	Defence capabilities will be sustained to meet operational requirements as identified in the specific Materiel Sustainment Agreement.	Indicators are included in individual Materiel Sustainment Agreements. The DMO reports to its customers against these.
Program 1.3 Policy Advice and Management Services	The DMO will meet Government, Ministerial and departmental expectations and timeframes for the provision of policy, advice and support and delivery of industry programmes.	The DMO meets Ministerial, government, Defence and DMO expectations and timeframes for provision of policy, advice and support and delivery of industry programmes.

The *DMO Strategic Framework 2013-15* is discussed on page 144 of the PBS. As a result of the new Framework there are four change priorities for 2014-15:

- Deliver acquisition and sustainment more efficiently
- Interact with reviews
- Streamline internal processes
- Reform the DMO.

The 'Top Thirty' sustainment products

The top 30 sustainment activities for DMO by forecast expenditure from Table 90 in the PBS are listed in Table 2.8.4, 2.8.5, 2.8.6 and 2.8.7 along with derived figures based on planned rates of effort. These include per-platform and per-flying-hour costs.

Table 2.8.4: Top 30 sustainment products – aerospace and helicopters

	Number	Cost ($m)	Hours flown	Annual cost per platform ($ million)	Cost per flying hour ($ '000)
Super Hornet	24	162	5,050	6.75	32.08
AP-3C Orion	18	125	7,900	6.94	15.82
F/A-18 Hornet	71	158	13,000	2.23	12.15
Hawk LIF 127	33	91	7,500	2.76	12.13
C-130J	12	98	7,350	8.17	13.33
C-17	6	61	5,200	10.17	11.73
MRH-90	47	157	5,400	3.34	29.07
Seahawk	16	56	4,200	3.50	13.33
Seahawk MH-60R	13	62	2,400	4.77	25.83
Black Hawk	34	71	5,090	2.09	13.95
ARH Tiger	22	114	4,726	5.18	24.12
AEW&C	6	163	3,600	27.17	45.28
SP Aircraft*	5	48	3,800	9.60	12.63
KC-30A AAR	5	63	3,100	6.75	32.08

*Source 2014-15 PBS *mixed fleet of BBJ and CL604*

Table 2.8.5: Recent budgeted sustainment costs per unit – aerospace and helicopters

	Cost per aircraft ($ million)							
	07-08	**08-09**	**09-10**	**10-11**	**11-12**	**12-13**	**13-14**	**14-15**
Super Hornet	-	-	0.67	2.58	4.58	4.63	5.13	6.75
AP-3C Orion	6.37	6.90	6.16	6.32	5.84	5.53	6.11	6.94
F/A-18 Hornet	1.68	1.61	1.70	1.75	2.63	2.15	2.23	2.23
Hawk LIF 127	2.88	2.70	2.64	2.70	2.70	2.21	2.36	2.76
C-130J	5.42	9.42	9.25	6.17	6.50	6.75	7.92	8.17
C-130 H	-	6.25	-	4.50	4.75	-	-	-
C-17	13.75	9.75	10.75	-	14.25	-	-	10.17
MRH-90	-	47.50	4.27	5.20	6.93	2.09	2.63	3.34
Seahawk	4.94	-	4.94	4.56	3.94	3.88	4.06	3.50
Black Hawk	1.97	2.15	3.03	2.91	2.82	2.53	2.53	2.09
ARM Tiger	-	-	3.77	3.91	4.36	4.36	4.73	5.18
AEW&C	-	-	-	23.5	28.5	26.83	27.17	27.17
	Cost per flying hour ($ '000)							
	07-08	**08-09**	**09-10**	**10-11**	**11-12**	**12-13**	**13-14**	**13-14**
Super Hornet			39.3	29.5	22.9	23.13	25.63	32.08
AP-3C Orion	16.1	16.4	15.2	15.2	14.1	13.29	13.92	15.82
F/A-18 Hornet	10.5	10.2	10.1	9.5	14.4	11.77	12.15	12.15
Hawk LIF 127	15.2	13.6	13.5	11.1	11.9	9.73	10.40	12.13
C-130J	14.1	15.7	16.2	10.1	10.6	11.02	12.93	13.33
C-130 H	-	22.2	-	16.9	17.8	-	-	-
C-17	26.2	11.6	12.7	-	12.7	-	-	11.73
MRH-90	-	780.1	146.8	52.0	34.7	31.79	30.25	29.07
Seahawk	31.1		23.2	20.3	15.0	14.76	15.48	13.33
Black Hawk	10.6	10.2	12.7	11.5	11.9	11.47	13.87	13.95
ARM Tiger	-	-	46.2	20.7	14.5	13.43	30.95	24.12
AEW&C	-	-	-	70.5	65.8	57.50	45.28	45.28

Source: PBS

The above figures need to be treated with caution. Various fleets enjoy different amounts of contracted support (the cost of which is included) and manpower support from Defence's own workforce (which is not included). More generally, there are usually other costs (like fuel) that are not included separately for each platform. Also, one-off costs can heavily influence the results, including when platforms are first being brought into service. It will be some years before useful trends emerge.

Table 2.8.6: Top 30 sustainment products – maritime

	Number	2007-08 ($m)	2008-09 ($m)	2009-10 ($m)	2010-11 ($m)	2011-12 ($m)	2012-13 ($m)	2013-14 ($m)	2014-15 ($m)
Collins submarines	6	322	324	325	416	479	507	580	560
Anzac frigate	8	219	301	206	151	189	227	250	280
FFG frigate	4	103	115	113	111	127	126	121	125
LHD									71
Mine Hunter Coastal	6	61	61				60	80	65
Armidale PB	14							44	
Auxiliary Oiler	1						68		48

Source: DAR, 2013-14 PAES, 2014-15 PBS

Table 2.8.7: Top 30 sustainment products – miscellaneous

	2007-08 ($m)	2008-09 ($m)	2009-10 ($m)	2010-11 ($m)	2011-12 ($m)	2012-13 ($m)	2013-14 ($m)	2014-15 ($m)
ADF Clothing and Equipment	117	89	84	70		37	45	50
ADO Commercial Fleet	73	75	59		54		52	71
B Vehicles	117	127	115	83	84	66	71	56
Explosive ordnance	357	360	324	251	291	296	334	362
Wide Area Surveillance	77	79	76	88	87	84	99	98
Battlespace Communications	32	51					37	46
Tactical Electronic Warfare								52
Fuels and Lubricants	422	419	318	378	419	388	493	576
Guided Munitions								146
Protected Mobility Fleet				22				
Command and Intelligence							49	52
Air Traffic Control							41	
Health Systems							42	
Naval Communications							39	

Source: DAR, 2013-14 PAES, 2014-15 PBS

People

The DMO workforce is a mixture of military personnel, civilians and contractors as shown in in Table 2.8.8.

The civilian and military personnel in DMO are held under slightly different arrangements. Civilians in DMO are Defence employees and the CEO of DMO has delegations from the Secretary of the Department that he exercises in this regard. The expenses associated with DMO's civilian workforce appear in their financial statements as employee expenses.

In contrast, the military personnel in DMO are provided through a purchaser-provider arrangement with Defence. This does not cover the full per-capita cost of the military personnel, but rather represents a payment for their services roughly corresponding to their costs exclusive of allowances and overheads specific to their military role (and this is broadly commensurate with what would be needed to secure similar skills in the labour market). Thus, if the military fail to deliver sufficient personnel (due, for example, to operational demands or shortages) DMO has the money to hire people from outside. Note that the budgeted and estimated personnel figures for DMO represent a *maximum ceiling* and that DMO will only engage the staff necessary to perform acquisition and sustainment tasks that arise in future years.

Table 2.8.8: Workforce summary for DMO (average funded strength)

	04–05 actual	05–06 actual	06–07 actual	07–08 actual	08–09 actual	09–10 actual	10-11 actual	11-12 actual	12-13 actual	13-14 est.	14-15 budget	15-16 est.	16-17 est.	17-18 est.
RAN	306	277	281	277	296	303	303	303	311	310	314	364	368	368
Army	461	411	389	386	404	412	418	389	384	361	364	492	497	494
RAAF	770	762	763	794	808	802	803	718	709	669	669	944	957	957
Total	**1,537**	**1,450**	**1,433**	**1,457**	**1,508**	**1,794**	**1,525**	**1,410**	**1,404**	**1,341**	**1,347**	**1,800**	**1,822**	**1,818**
APS	4,363	4,502	4,951	5,304	5,552	5,526	5,510	5,993	5,786	4,815	4,777	5,106	5,141	5,098
APS backfill^									359	428	432			
APS Total	4,363	4,502	4,951	5,304	5,552	5,526	5,510	5,993	6,135	5,243	5,209	5,106	5,141	5,098
Reserve	125	191	249	311	?	?	82							
PSP	388	393	298	181	176	120	24	31	33	22	48	46	46	44
Total*	**6,288**	**6,345**	**6,682**	**6,942**	**7,236**	**7,735**	**7,141**	**7,434**	**7,181**	**6,606**	**6,604**	**6,952**	**7,009**	**6,960**

*Source: DAR, 2012-13 PAES and 2013-14 PBS. *Total excludes reservist. ^APS replacements for absent military personnel*
2012-13 figures for DMO military are taken from 2012-13 PAES

The 'Top Thirty' projects

The PBS lists the top 30 major capital investment projects by 2014–15 expenditure [PBS Table 84 page 149] and provides a description of each. We reproduce the top 30 projects in Table 2.8.9 below. The PBS also includes a listing of previously approved top 30 projects that is useful [Table 86, p. 162]. The estimated slippage in the gross program is 8%— fully 10 percentage points less than last year. But last year's figure was anomalously high as reflected in the need to inject an additional $500 million during the year. Presumably, the reduction reflects the pressures which emerged in the Capital Investment Program during 2013-14. Note that the reliance on a relatively small number of large projects makes the outcome sensitive to how each of these large projects performs.

Table 2.8.9: Top 30 Defence Major Capital Investment Projects (million $)

Project	Project Number	Approved Project Expenditure	Spend to 30 June 2014	2014-15 Budget Estimate
Aerospace Systems				
Growler Airborne Electronic Attack Capability	AIR 5349 Phase 3	3,037	335	797
Maritime Patrol and Response Aircraft System	AIR 7000 Phase 2	3,505	122	324
Battlefield Airlift - Caribou Replacement	AIR 8000 Phase 2	1,289	446	314
Air to Air Refuelling Capability	AIR 5402	1,821	1,587	142
Airborne Early Warning and Control Aircraft	AIR 5077 Phase 3	3,873	3,513	64
C-17 Globemaster III	AIR 8000 Phase 3	1,697	1,364	57
Lead-In Fighter Capability Assurance Program	AIR 5438 Phase 1A	264	69	49
Electronic Systems				
Battlefield Command Systems	LAND 75 Phase 4	327	17	158
Battlespace Communications System (Land)	JP 2072 Phase 3	176	15	126
Battlespace Communications System (Land)	JP 2072 Phase 2A	460	274	73
Anzac Electronic Support System Improvements	SEA 1448 Phase 4A	269	33	58
Battle Management System	LAND 75 Phase 3.4	315	213	38
Joint Command Support Environment	JP 2030 Phase 8	256	168	33
C-130J Large Aircraft Infrared Countermeasures (LAIRCM)	AIR 5416 Phase 4B2	203	26	31
Replenish Nulka Warstock	SEA 1397 Phase 5A	85	36	27
High Frequency Modernisation	JP 2043 Phase 3A	580	453	25
Helicopter Systems				
Future Naval Aviation Combat System Helicopter	AIR 9000	3,237	902	505

	Phase 8			
Multi Role Helicopter	AIR 9000 Phase 2	3,785	2,430	286
Medium Lift Helicopter	AIR 9000 Phase 5C	617	249	166
New Air Combat				
Joint Strike Fighter Aircraft	AIR 6000 Phase 2A/B	2,940	446	238
Bridging Air Combat Capability	AIR 5349 Phase 2	288	145	32
Air Warfare Destroyer				
Air Warfare Destroyer Build	SEA 4000 Phase 3	7,848	5,192	616
Land Systems				
Field Vehicles and Trailers - Overlander Program	LAND 121 Phase 3A/5A	1,021	595	171
Bushmaster Protected Mobility Vehicles	LAND 116 Phase 3	1,252	918	68
Overlander - Medium Heavy Capability, Field Vehicles, Modules and Trailers	LAND 121 Phase 3B	3,469	53	119
Maritime Systems				
Amphibious Deployment and Sustainment	JP 2048 Phase 4A/B	3,089	2,621	143
Anzac Ship Anti-Ship Missile Defence	SEA 1448 Phase 2B	678	468	77
Amphibious Watercraft Replacement	JP 2048 Phase 3	240	90	55
Anzac Ship Anti-Ship Missile Defence	SEA 1448 Phase 2A	387	300	28
Future Submarine - Acquisition	SEA 1000 Phase 1A	235	65	98
TOTAL TOP 30 APPROVED PROJECTS		**47,245**	**23,147**	**4,919**
Other Approved Project Estimate				621
Total Program				5,540
Management Margin (8% slippage)				-432
Net from existing projects				5,109
Projects Planned for Government Approval				771
Total Funds Available				**5,879**

Source: 2014-15 PBS

Chapter 3 – Defence Funding

This chapter deals with defence funding in four parts: (1) a brief survey of Australian defence funding from the mid-1980s through to 2009; (2) an analysis of defence funding from 2009 until 2013; (3) an examination of the funding outlook in the 2014 defence budget; (4) a survey of the risks and challenges facing the government's commitment to spend 2% of GDP on defence within the decade commencing 2013-14.

For ease of reference, we'll refer to the 2000, 2009 and 2013 Defence White Papers as *Defence 2000, Defence 2009* and *Defence 2013* respectively. Readers interested in a more detailed historical survey should consult the obituary for *Defence 2000* in Chapter 3 of the 2009-10 ASPI Budget Brief.

Defence funding from the 1980s to 2009

The late 1980s and 1990s were lean years for Defence. Apart from fluctuations due to foreign exchange movements and operational supplementation, defence spending was kept more-or-less constant in real terms across the period. In fact, the Defence budget was higher in 1985-86 ($14.5 billion) than it was eleven years later in 1996-97 ($13.7 billion), as measured in real 2008-09 dollars.

Because the cost of maintaining military capability exceeds inflation by 2–3%, the Defence budget came under growing pressure as the years went by. To try to close the gap between means and ends, successive governments pursued 'efficiency' programs of one sort or another through the 1990s (see Chapter 4 of the 2009-10 ASPI Budget Brief for further details).

Nonetheless, by the end of the decade Defence was in a sad state: the permanent force had shrunk by more than 20,000 positions compared with the mid-1980s; a 'train wreck' of block obsolescence was looming with no money in sight for modernisation; the preparedness of the force was poor with many 'fitted-for-but-not-with' platforms and others badly in need of upgrade; and logistics was hollow and underfunded. It was against this background that the then government decided in 1999 to develop a White Paper with the aim of putting Defence planning and funding on a sustainable footing.

The tumultuous events in East Timor in 1999 delayed the White Paper until the end of 2000. But it was perhaps a delay worth having. East Timor was the largest Australian operation since Vietnam and it stretched parts of the defence force severely. In the process, serious shortcomings in equipment, logistics and preparedness were exposed. It's unlikely that the government would have been as generous in 2000 without the experience of the East Timor operation.

The 2000 White Paper

The only Defence White Paper produced by the Howard government, *Defence 2000*, sought to achieve a coherent package of strategy, capability and funding for Australia's defence for the decade 2001-02 to 2010-11. On the capability side, a *Defence Capability Plan* (DCP) was published that detailed 165 separate phases of 88 capability proposals, valued at around $50 billion, planned for the forthcoming decade.

The entire package, including new and pre-existing capability, was funded through a decade-long funding envelope that roughly equated to 3% average annual real growth. Although earlier White Papers had suggested near-term funding levels, never before had a decade-long funding commitment been made—let alone one with a talisman-like goal of '3% real growth'.

Defence 2000 provided more than $30 billion spread across four categories, including: $21 billion for the purchase of major capital equipment; $3.2 billion to cover the through-life support costs of new capabilities planned to enter service as a result of the DCP; $5 billion to cover an expected annual 2% growth (above inflation) in personnel costs and $1 billion to augment the operating cost baseline in the Defence budget. In addition, Defence was allowed to retain within its annual funding base around $450 million of unspent operational supplementation from East Timor.

The 3% funding commitment was extended out to 2017-18 in the 2006 and 2008 budgets. Before turning to these and other funding measures from the last decade, it's worth pausing to look back at *Defence 2000* and ask how far Defence has got in delivering the goals set for it.

At the risk of oversimplification, *Defence 2000* sought to achieve four things: (1) modernise the ADF by replacing or upgrading ageing assets and introducing new capabilities in select areas; (2) improve the preparedness of the ADF so that it was made up of 'fully developed capability' rather than hollow units and fitted-for-but-not-with platforms; (3) boost the capability of the ADF to undertake expeditionary operations in the immediate region; and (4) sustainably align Defence plans and funding.

Of the four goals, the modernisation of the ADF was the least successful. Persistent and widespread delays in the approval and execution of defence acquisitions delayed the delivery of many capabilities, with delays of 4-5 years not uncommon. In part, this reflected a systematic underestimation of costs that ensured there was never going to be enough money to deliver all that was planned. Further delays arose due to insufficient industry capacity, tardy approval of new acquisitions and all too frequent technical problems with equipment under development. In fact, the combination of delayed approvals and delayed projects saw Defence unable to spend all the money it had been given to buy new equipment. Over the period covered by *Defence 2000*, we estimate at least $4.4 billion of planned investment was deferred. The actual figures are probably higher but we can't be sure because the full extent of the deferrals wasn't disclosed in the 2009-10 Budget.

One area where Defence can claim success is in improving the preparedness of the defence force. While problems remain in some areas such as the submarine and amphibious forces, the trend over the past decade has been favourable. The ADF is now more ready and able to mount and sustain deployments—as evidenced by its current high operational tempo. Moreover, the capacity of the ADF to conduct expeditionary operations in our immediate region is better now than at any time since the Vietnam conflict. Or at least it will be once the Navy's amphibious lift capacity is fixed. The unexpected collapse of the amphibious fleet in 2011 showed that the management and internal reporting of preparedness remained poor at least until that point. Of course, we don't know what we don't know; there may be problems lurking in areas that haven't been tested of late.

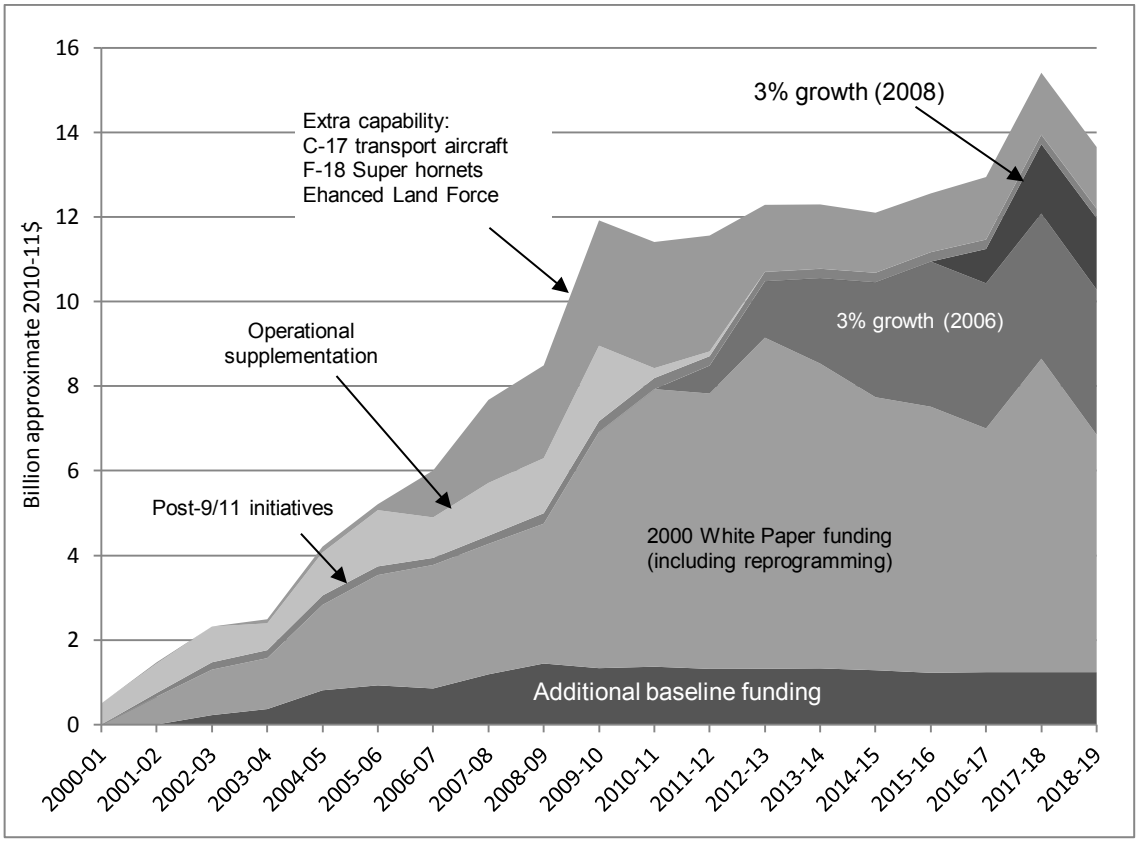
As for putting Defence finances on a sustainable footing, it wasn't long before Defence was struggling to deliver the outcomes sought by *Defence 2000* within the funding provided. In 2003, an internal Defence Capability Review recommended cuts to the force structure to contain costs, including the decommissioning of two FFG frigates, the early retirement of the F-111 fleet and the laying up of two mine-hunting vessels. But these cuts failed to bring the books into balance and from 2005 onwards additional funds (amounting ultimately to around a $1 billion a year) were made available to Defence to manage the baseline cost of personnel, estate and logistics. At the same time, savings measures of $200 million a year were imposed on Defence to redirect money towards combat capability.

Boom times: 2002-2008

Bridging the gap between the means and ends of *Defence 2000* was only the start of the government's generosity to Defence. From around 2006, the previous government provided additional money for a range of new capability initiatives, including four C-17 transport aircraft ($3.2 billion), 24 F/A-18F Super Hornet strike fighters ($6 billion), and the Enhanced Land Force initiative, which included adding two infantry battalions to the Army at a cost of $10 billion over a decade. This additional funding came on top of that provided for new and expanded capabilities in the aftermath of 9/11 and the deployments that followed.

Because official budget figures are invariably given in 'out-turn' format that anticipates future inflation and foreign exchange rates, it's difficult to give a definitive figure for the value of additional funds provided post-2000. The best we can do is to capture the scale of funding using the historical values that appeared in the budget papers at the time, converted to 2010-11 dollars. The result appears in Figure 3.1.

Figure 3.1: Additional funding 2000 to 2008



Source: ASPI analysis of budget papers and DAR, CPI inflation used

Despite all the money flowing into Defence, it remained unclear whether adequate funds were available pre-*Defence 2009* to deliver the capabilities sought at that time. On one hand, it looked like not enough money had been set aside to crew and operate the raft of new capabilities under development—hence the $10 billion savings program announced in early 2008. On the other hand, Defence was unable to spend the money it had for both investment and recurrent spending. So much so, that it was directed to absorb $1.1 billion of measures in 2008-09 following an abnormally large windfall from price supplementation (and the embarrassing hand back of $830 million of unspent funds from 2007-08). This was the confusing state of Defence funding prior to the release of *Defence 2009.*

From *Defence 2009* to *Defence 2013*

On 3 May 2009, the Prime Minister released the long-awaited 2009 Defence White Paper. Entitled *Defending Australia in the Asia Pacific Century: Force 2030* the 138-page document included one and half pages—585 words to be precise—on how the government planned to fund Defence over the next 21 years. The plan had two parts.

First, a funding model with the following elements:

- 3 per cent real growth in the Defence budget to 2017-18
- 2.2 per cent real growth in the Defence budget from 2018-19 to 2030
- 2.5 per cent fixed indexation to the Defence budget from 2009-10 to 2030
- that Defence will reinvest savings from its [$20 billion decade-long] Strategic Reform Program back into priority Defence capabilities as agreed by the Government
- shortfalls against the White Paper funding plan will be offset by Defence.

Second, 'Defence [will] undertake a substantial program of reform, efficiencies and savings to underpin the achievement of White Paper objectives... [and] correct long-term hollowness and remediate the enabling functions of the Australian Defence Force'. This is, of course, the aforementioned $20 billion Strategic Reform Program.

Further detail was provided eight days later in the 2009-10 Budget. And, while the wording of the funding commitment in *Defence 2009* was retained, the government stopped short of handing over the money. Instead, a substantial wedge of promised funding was deferred into the future. As best we can work out (the 2009-10 budget was less clear than it could've been) the net result was an $8.8 billion reduction in funding across the forthcoming decade. In addition, Defence was directed to 'absorb' additional new budget measures amounting to $585 million over four years and $1.7 billion over the decade in the 2009-10 Budget.

The initial deferral of funds in 2009 was only the start of the steady erosion of the money available to Defence to deliver *Force 2030*. Table 3.1 collects together the key measures. Each of the categories has a different impact on the availability of funds.

The $10.6 billion of **deferrals** didn't necessarily represent lost money, but rather money that was shifted (reprogrammed) to mostly unknown points in time in the second half of the 2010s or beyond.

Table 3.1: Key budget actions impacting the Defence budget 2009-2012

Year	Initiative	Cost
Deferrals		
2009 Budget	Deferral of funding to beyond 2015-16	$8,810 million
2010 Budget	Deferral of investment funding to beyond 2015-16	$521 million
2011 Budget	Deferral of investment funding to beyond 2014-15	$1,281 million
	Total	**$10,612 million**
Savings		
2011 Budget	Increased efficiencies and savings (over 10 years)	$3,837 million
2011 mid-year	Efficiency dividend (over 10 years)	$670 million
2012 Budget	Expenditure reduction measures (over 10 years)	$5,455 million
	Total	**$9,962 million**
Absorbed costs		
2009 Budget	Costs absorbed 2009-10 to 2018-19	$1,680 million
2010 Budget	Cost of force protection ($912 m) – Cost of existing projects ($402 m)*	$510 million
2012 Budget	Cost of Moorebank-Holsworthy relocation	$332 million
	Total	**$2,522 million**
Hand backs		
2009-10**	$131 million unspecified	$131 million
2010-11	$1.1 billion in capital investment	$1,100 million
2010-11	$400 million in recurrent expenses	$400 million
	Total	**$1,631 million**

*Source: DAR and PBS. *Senate question on notice #140, September 2010. **SLC Hansard 30 May 2011.*

The $10 billion dollars of **savings** represented cuts to defence funding for which there was no suggestion of the money ever being returned at some point in the future. Around $4.5 billion of the savings were supposedly the result of efficiencies, the remainder were outright cuts. Defence has no one to blame but itself for most of the former, having handed back money in 2010-11 and advised the government of additional savings available from shared services reform (an area that subsequently had to be supplemented with additional funds in the 2012-13 budget).

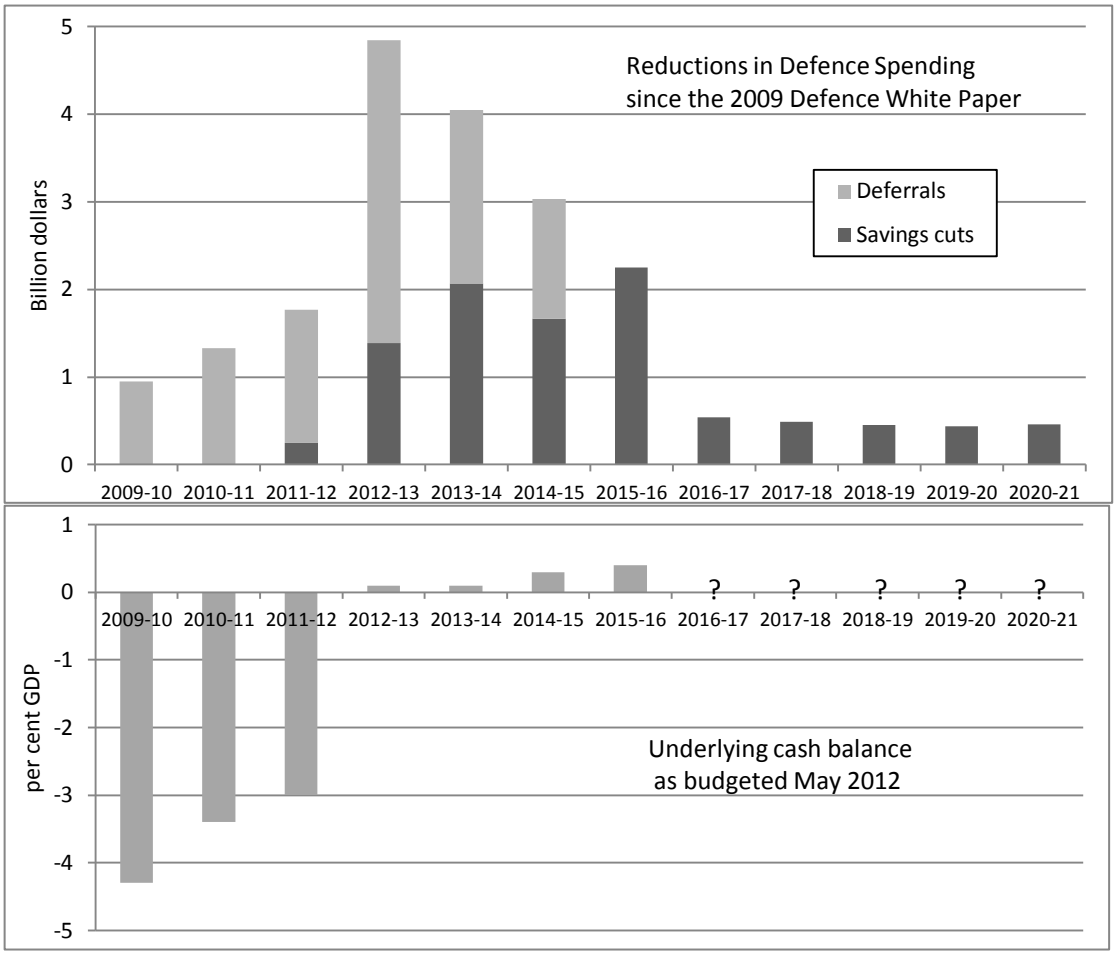
Absorbed costs are an additional impost put on Defence to deliver something extra without additional funding. The figure we've used is actually only a subset of the measures that have technically been absorbed for reasons explained in Chapter 3 of last year's Brief. Similarly, the hand back of money in 2010-11 is complicated by the inter-year shift we also explained last year.

In summary, over the life of the 2009 Defence White paper (May 2009 to April 2013) Defence handed back $1.6 billion, of which $780 million it was unable to spend. $10.6 billion of planned investment was deferred and $10 billion of promised funding was returned to Treasury, including from areas that were supposed to be delivering efficiencies but which subsequently encountered cost pressures that were exacerbated by the need to absorb $2.5 billion worth of unfunded measures.

Setting aside the hand backs, Defence's financial bottom line was impacted by two categories of government decision; deferrals and savings cuts. The aggregate effect of these

measures is plotted in Figure 3.2 atop the underlying cash balance for the Commonwealth as estimated at the time of the 2012-13 Budget. Note that if Defence spending had been held at the levels promised in *Defence 2009*, in May 2012 the Commonwealth would have been projected to remain in deficit for two additional years until 2014-15.

Figure 3.2: Reduced Defence funding and the underlying cash balance



Source: DAR, PBS and the 2012-13 Budget Overview.

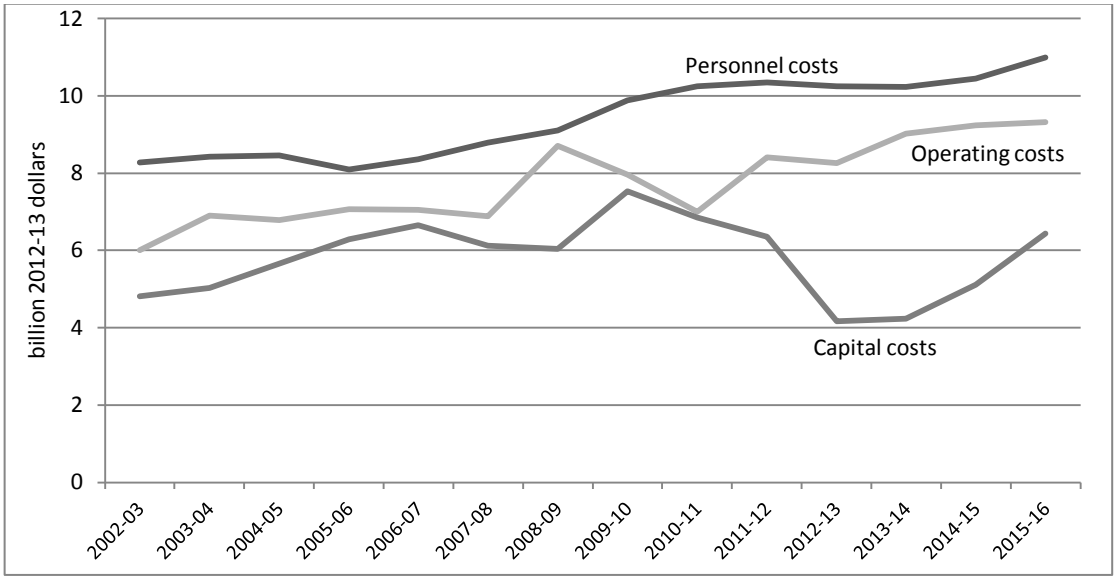
The clear correlation between reduced defence expenditure and the return to surplus isn't a surprise. Back in 2007-08, the ASPI Budget Brief (p. 135) included a precautionary risk analysis of factors that could impede the progress of *Defence 2000*, including the risk posed by a recession. The conclusion at that time, based upon the experience of the recessions in the early 1980s and 1990s, was that the threat to defence funding occurred not at the outset of an economic downturn, but around the time when the government was striving to return to surplus. Events between 2009 and 2012 confirmed that analysis.

Figure 3.3 is our best attempt to isolate the underlying real trends in personnel costs, capital investment and operating costs at the time of the 2012-13 budget, resulting from the cuts and deferrals in the preceding three years. (Supplementation for deployments has been accounted for via a methodology explained in Chapter 3 of last year's budget brief.) As is apparent, and as might be expected, capital investment bore the brunt of the cuts.

It's a matter of opinion whether the potential political gains of delivering a surplus in 2012-13 justified the cuts to defence funding. As it happened, the effort was for naught and the

Commonwealth fell into deficit by $19.5 billion that year due to a collapse in revenues resulting from deterioration in the terms of trade.

Figure 3.3: Underlying trends in defence costs circa May 2012



Source: ASPI analysis of 2012-13 PBS and earlier Annual Reports.

On 3 May 2013, the Prime Minister and Defence Minister released the 2013 Defence White Paper—four years to the day after its predecessor and one year earlier than planned. Entitled simply *Defence White Paper 2013,* the 132-page document includes one and a half pages—675 words to be precise—on how the government plans to fund Defence. Although it devoted 90 more words to the topic than its predecessor, it actually managed to say somewhat less. Key points include:

- The government 'remains committed to maintaining an ADF workforce of approximately 59,000 permanent members'.

- In addition to the annually updated four-year Forward Estimates funding model there'll also be a 'subsequent six-year general guidance [i.e. a single aggregate figure] for Defence planning purposes'. The 2013-14 PBS gave that figure as $220 billion.

- The 'Government is committed to increasing Defence funding towards a target of 2 per cent of GDP. This is a long-term objective that will be implemented in an economically responsible manner as and when fiscal circumstances allow'.

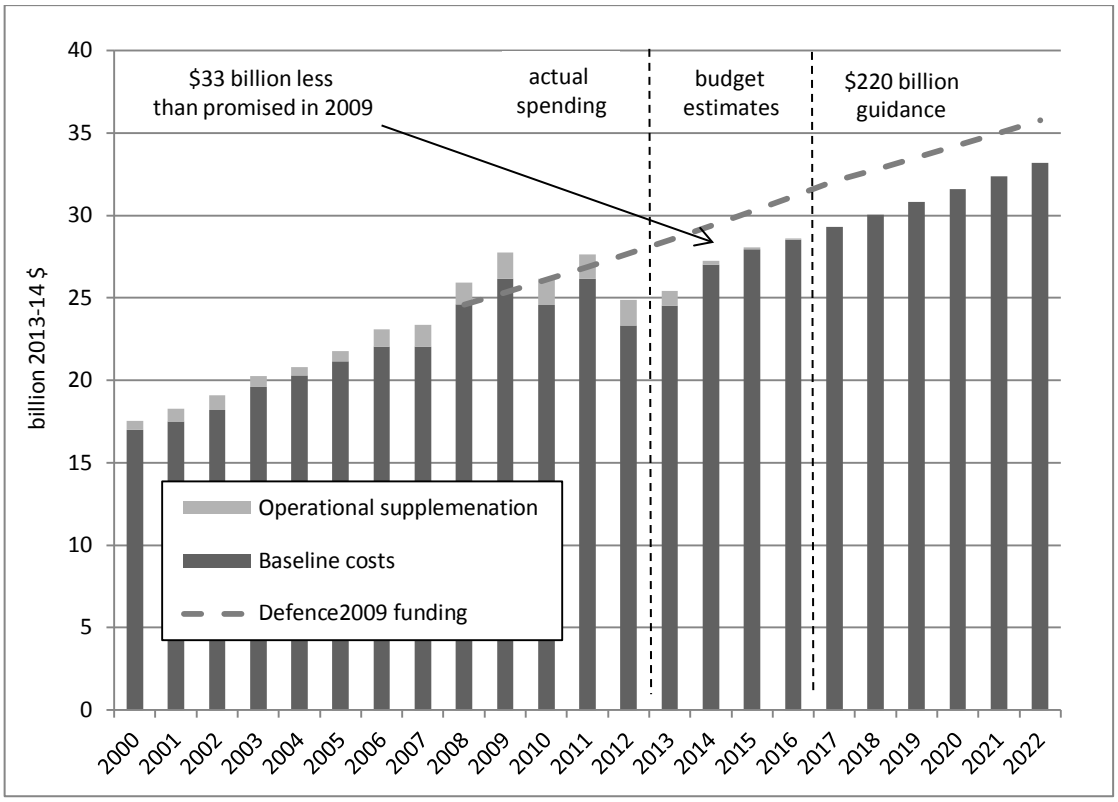
More importantly, by May 2013 the prospects of achieving a surplus were long gone and the way was open for the government to alleviate Defence's budget dilemma by providing additional funding. And it did. As best we could estimate using the fragmentary information available in May 2013, around $3 billion was brought forward from the then fourth year of the Forward Estimates and the years beyond, and around $10.7 billion of funding was cut from those same years. So while short-term pressures were partially addressed, the longer-term picture was made even less favourable. (Note that the estimate of $10.7 billion being removed is based on the inadvertent disclosure of long-term funding in the *2010 Intergenerational Report*.)

Critically, the $10.7 billion taken away in 2013 was *in addition* to the roughly $10 billion taken away (as opposed to deferred) in 2011 and 2012. Moreover, it doesn't capture any funds deferred to beyond 2022 or the erosion of buying power due to absorbed costs. All up, this puts a lower limit of around $21 billion for the accumulated shortfall relative to 2009 promises.

An alternative estimate of the shortfall can be found by comparing explicit *Defence 2013* funding with the growth promises made in *Defence 2009*. In Figure 3.4, post-*Defence 2013* funding is explicitly compared with the *Defence 2009* promise of 3% real growth to 2017-18 and 2.2% subsequently. To avoid overestimating the difference between current and past plans, 3% real growth has been projected relative to the underlying defence spending in 2008-09, exclusive of operational costs. That's notwithstanding that Defence absorbed just over a billion dollars of operational costs in that year, which would make it reasonable to use the full figure. A much larger difference would have resulted from using the figure inclusive of the cost of operations, or even more so by commencing the projection from 2009-10 when spending was significantly higher.

Even with these conservative steps taken, the difference in funding between the promises of 2009 and those of 2013 come out to be $32.9 billion as measured in real 2013-14 dollars for the period 2009-10 to 2022-23.

Figure 3.4: *Defence 2013* funding compared with the promises of *Defence 2009*



Source: Annual reports and various PBS and PAES (2012 = 2012-13 etc.)

The difference between the number derived from reconstructing Defence's year-by-year funding guidance ($21 billion) and the figure from explicitly applying the 3%/2.2% real growth promise ($33 billion) is easily understood. From the very start, Defence wasn't given a future-funding envelope consistent with what was said in *Defence 2009*. In effect, the

commitment to 3%/2.2% real growth was taken to mean (within the corridors of government) that Defence's pre-existing funding envelope out to 2017-18 would be maintained. And while that funding envelope may have originally been based on 3%/2.2% real growth, by the time 2009 came around the funding envelope had been reshaped by reprogramming adjustments, foreign exchange movements, and additional funded initiatives such as the Super Hornet purchase. As an aside, this explains why it was necessary to smooth out the future-funding envelope in this year's budget to remove impractical chunks of funding that had accumulated in the 2017-18 FY as a result of reprogramming that occurred all the way back in the 2000s.

Regrettably, the difference between the funding that was promised in plain English in *Defence 2009* and what was actually made available to Defence was never explained—hardly surprising given that there was around $10 billion less available than was ostensibly committed to.

Confused yet? To be honest it's taken me a while to work out what's been going on. Of course, all of this could be avoided if the government simply published its explicit ten-year defence-funding envelope each year with the budget.

Perhaps the best way to describe the funding situation immediately after *Defence 2013* was that for the period 2009-10 to 2022-23 funding was $33 billion less than promised in *Defence 2009* and $21 billion less than Defence was planning on—not counting the substantial reduction in spending capacity due to absorbed measures. In a media release (16 May 2014), the current Defence Minister confirmed funding shortfalls commensurate in scale with the foregoing discussion.

When looking at the shortfall in funding—be it $20 or $30 billion—it's important to remember that the capability goals of *Defence 2009* largely survived through into the 2013 document. With capability targets static and funding at least $2 billion a year less, the result was a yawning gap between means and ends.

It was hardly surprising therefore, that budget pressures emerged early. And in one of its last acts prior to the 2013 election, the outgoing Gillard government was forced to bring forward $750 billion from 2016-17 into the period 2013-14 to 2015-16 to address near-term funding shortfalls (see 2013-14 PAES).

Defence funding and the 2014-15 budget

Near-term budget pressures continued to emerge during 2013-14 and the incoming Abbott government used the Supplementary Estimates process in early 2014 to bring forward an additional $1.5 billion into the period 2013-14 to 2015-16. The funds came from $2 billion removed from 2017-18, with the remaining $520 million pushed back into 2019-20 and 2020-21. In doing so, immediate funding pressures were alleviated—especially in the capital investment program—and an impractical hump in funding for 2017-18 was removed. The shifting of funding into the 2020s is entirely notional, if the government wants to hit its 2% of GDP target in 2023-24 a lot more money is going to be needed around that time than is presently programed with or without the deferred funds.

Deterioration in the value of the Australian dollar from its highs in 2011 and 2012 led to still further funding being provided in the near-term and beyond. The cumulative impact of the various funding shifts and forex adjustments is summarised in Table 3.2 below. The only other major shifts over the period were $191 million of operational supplementation and $192 million to reinstate the ADF Gap-Year program in the 2014-15 budget.

Table 3.2: Key funding changes 2013-14

	2013-14	2014-15	2015-16	2016-17
Forex adjustment (2013-14 PAES)	381.7	428.3	480.8	528.3
Funding brought forward (2013-14 PAES)	359.4	304.0	-89	-1,000.4
Forex adjustment (2014-15 PBS)	91.1	223.9	125.7	117.4
Funding brough forward (2014-15 PBS)	300.0	300.0	550.0	150.0
Total	1,132.2	1,256.2	1,067.5	-204.7

Source: 2013-14 PAES, 2014-15 PBS

Although news that defence spending will reach 1.8% of GDP in 2014-15 elicited favourable commentary in the media, care is needed in intepreting the result. Table 3.3 lists the various factors contributing to the GDP share for 2014-15, building on the anticipated figure of 1.66% estimated last May. Due to the peculiaries of accrual budgeting, the dollar figures don't precisely reconcile.

Table 3.3: Less than meets the eye—contributions to 1.8% of GDP

Contribution	Funds	Percent of GDP
Planned funding May 2013	27,874	1.66%
Government initiatives (Gillard/Rudd)	295	0.02%
Government initiatives (Abbott)	376	0.02%
Operational supplementation	191	0.01%
Foreign exchange adjustments	652	0.04%
Slower than anticipated nominal GDP growth		0.05%
Total	29,388	
Planned funding May 2014	29,320	1.80%

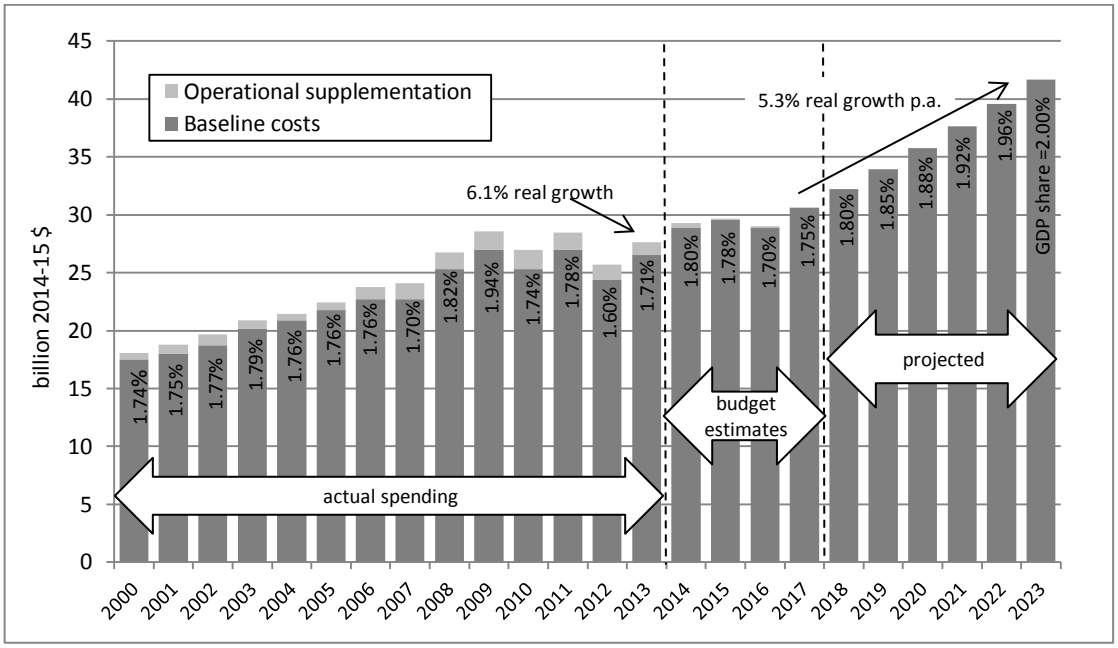
Source: 2013-14 PAES, 2014-15 PBS, 2013-14 and 2040-15 Budget Overviews

Note that the largest contributors to the increase in GDP share were external factors that will add absolutely nothing to the purchasing power of the defence budget; slow nominal GDP growth (0.05%) and foreign exchange (0.04%). Setting aside operational supplementation, which is automatic, the remaining contribution of 0.04% is shared jointly by the previous and current governments. If nothing else, this exercise demonstrates that if GDP share becomes the determinant of Australia's defence spending, the ADF will carry the risk of fluctuations in both foreign exchange and nominal GDP growth.

With a White Paper in preparation and the fiscal situation in flux, it's perhaps not surprising that the government has chosen not to disclose its plans for defence funding beyond the Forward Estimates. But if we assume, not unreasonably, that defence spending will rise steadily beyond the last year of the Forward Estimates (2017-18) to reach 2% of GDP in 2023-24, we can project defence funding a decade out. This is done in Figure 3.5 where we have assumed that GDP grows at the annual rates assumed in the National Commission of Audit's 2014 calculations beyond 2017-18. Note the six-year period of 5.3% annual real growth commencing 2017-18 needed to reach the target. In theory, it is possible to delay the

increase until later in the decade but only by creating an unrealistic 'ski jump' in defence funding in the final few years of the decade.

Figure 3.5: Defence funding projected to 2023-24



Source: DAR, 2013-14 PAES, 2014-15 PBS

Also noteworthy is the plateau in defence spending that's been created from 2014-15 to 2016-17 by bringing money forward from latter years. Of course, it's entirely open to the government to commence growth towards its 2% of GDP target earlier; the earlier growth begins the less rapidly it has to occur. But as we'll see later, the broader fiscal situation is likely to shape defence spending, especially in the medium term.

The prospects of achieving 2% of GDP by 2013-14

This section examines the risks and challenges to the government's promise of spending 2% of GDP on defence by 2023-24 from both the supply (the government) and demand (Defence) sides.

The most pressing risk to defence funding over the next few years comes from the government's commitment to return the federal budget to surplus. The relatively generous near-term treatment of defence funding in the last two budgets (don't forget the previous government provided around $3 billion extra in near-term funding last year) owes much to the deficit being so large as to preclude a near-term return to surplus. Had a surplus been within reach, the story would likely have been very different. Past experience with the recessions of the early 80s and 90s confirms that Defence can't count on being spared when the time comes. If any proof is needed, the cuts in anticipation of 'the surplus that never was' in 2012-13 should settle the matter (see Figure 3.3).

In fairness, it should be recognised that the current government showed an uncommon degree of resolve in the 2014 Budget by boosting near-term defence spending at the same time as imposing unpopular spending cuts and tax increases on other sectors. Perhaps it'll have the resolve to maintain its commitment to defence spending concurrent with the steps necessary to deliver a surplus. I suspect that it'll be a question of timing. Delaying a surplus

by one year to preserve defence spending might be possible in the first year of a government's term, but it's unlikely to happen in the third year with an election in the offing.

On current fiscal projections, the federal balance will be close to surplus around 2017-18 or 2018-19. On the standard electoral cycle, that corresponds to the first or second year of the next term of government and the start of the projected ramp-up to 2% of GDP. There's little point going into the myriad permutations of economic and electoral possibilities. Suffice to say that even though the government has so far demonstrated a strong commitment to defence, it has also shown a willingness to break promises (or more politely, to reframe commitment) in pursuit of so-called 'budget repair'. Thus, we have no assurance that medium-term defence funding will be immune from cuts if that's what it takes to get into surplus. Nor is that necessarily undesirable, if the gains from a (somewhat) speedier return to surplus outweigh the losses from a (somewhat) slower increase in defence spending.

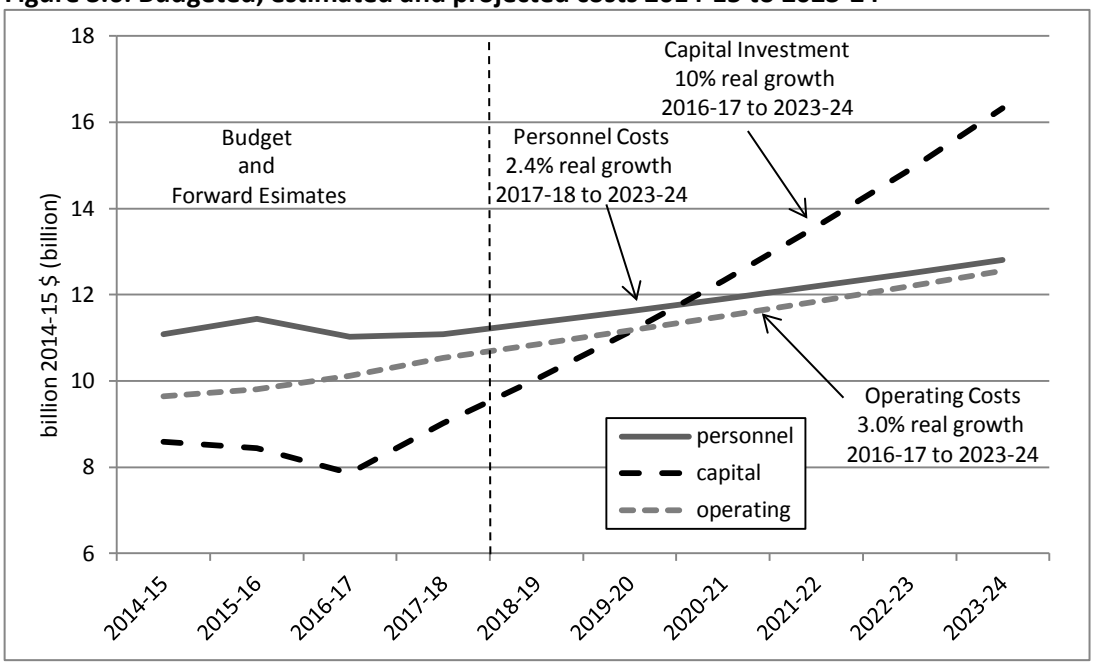
On the demand side, it's useful to separately examine defence spending in the short to medium term (1 to 3 years) and the long term (4 to 10 years). In the short to medium term, the planned rapid growth in capital investment over the next two years introduces the risk that money will be handed back—especially given the planned rapid surge in capital investment over the next several years. However, and as explained in Chapter 8, the presence of several large off-the-shelf purchases gives cause for a degree of optimism. Anyway, the risk of money being handed back isn't a good reason to scale back plans at this stage. Given the disruption and delay to the investment program in recent years (see Figure 3.3) it's more than worth the risk to regain the momentum towards re-equipping the ADF.

In the longer term, the question is whether Defence (and defence industry) can absorb the six years of budget growth necessary to achieve 2% of GDP by 2023-24. In terms of raw spending, there's no reason why they couldn't. As Figure 3.5 shows, we have 3-4 years to plan and prepare for a ramp-up requiring 5.3% real growth each year. It would be learned helplessness in the extreme to throw up our hands and say we can't manage a boost in defence spending from 1.75% of GDP in 2017-18 to 2% of GDP in 2023-24. After all, we managed to mobilise, fight and win WWII in a shorter period of time.

Looking beyond the question of raw spending, things get more interesting. Figure 3.6 shows the budgeted (2014-15 to 2017-18) and projected (2018-19 to 2023-14) shares of the defence budget going to personnel, capital investment and operating costs. For the period beyond 2017-18, personnel and operating costs have been projected out as explained below, while capital investment is estimated as the simple residual (= budget – personnel costs –operating costs). This makes sense because personnel and operating costs are effectively a consequence of the size and shape of the ADF, whereas the level of capital investment is discretionary on a year-to-year basis.

Consistent with established per-capita trends in personnel expenses (see Chapter 2 of this Brief) and given that current plans have the ADF reaching its 59,600 end state in 2017-18, personnel costs have been assumed to grow at 2.4% p.a. real beyond the Forward Estimates. Similarly, operating costs are assumed to grow at 3.0% p.a. real over the same period consistent with budgeted growth over the Forward Estimates.

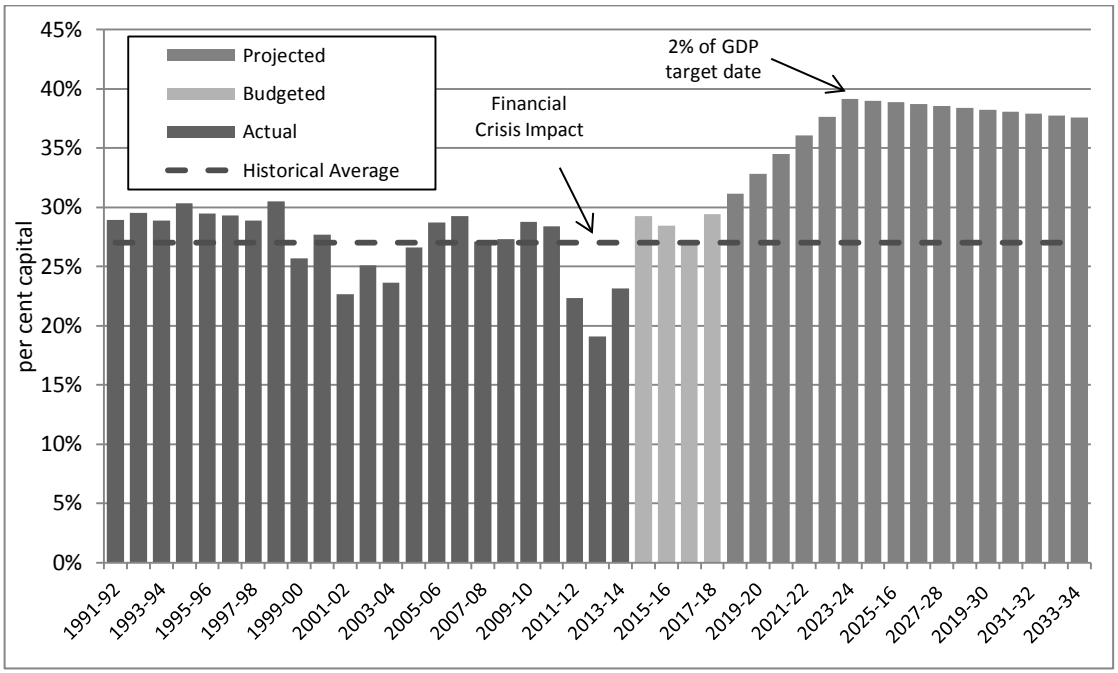
Figure 3.6: Budgeted, estimated and projected costs 2014-15 to 2023-24



Source: 2014-15 PBS and ASPI analysis

The resulting rapid growth in capital investment is extraordinary. If achieved, it would mean that capital investment over the next decade would amount to $112 billion compared with a mere $66 billion over the preceding decade measured in 2014-15 dollars. What about the years beyond 2023-24? Presumably the government doesn't plan to increase defence spending to 2% of GDP and then let it fall? Figure 3.7 plots the historical and projected share of the defence budget out to 2033-34 assuming that the labour component of the ADF remains static post 2017-18.

Figure 3.7: A mountain of equipment



Source: DAR, 2013-14 PAES, 2014-15 PBS and ASPI analysis

Beyond 2023-24, the capital component of the budget goes into slow decline as growth in personnel and operating costs outpaces GDP growth. Nevertheless, the subsequent decade would see an eye watering further $183 billion in 2014-15 dollars go to capital investment (assuming long-term real GDP growth of 2.5%). Given that we've managed to recapitalise a good share of the ADF during the fifteen years immediately past, it's pretty clear that such high levels of capital investment are unnecessary for a defence force of the size presently planned.

One way to make sense of the situation outlined above would be if there was a plan to expand the size of the defence force. By doing so, personnel and operating costs would rise and less money would be left for capital investment. In theory at least, there exists a larger ADF for which 2% of GDP in 2023-24 and beyond would bring personnel, operating and investment spending into something like a sustainable balance. (In practice, there'll never be a 'steady state' apportionment of capital, personnel and operating costs because they each have slightly different intrinsic growth rates).

However, to date, the government hasn't discussed any plans for expanding the size of the force. To the contrary, it has been hedging previous promises—most especially regarding 12 submarines—and more generally expressing concern about the parlous state of the DCP. At least in its public disclosures, the government has been worrying about Defence having too little money rather than too much. It may be that the government is not yet aware of the full consequences of its 2% promise—it's only early days in the white paper process.

The situation shouldn't come as a surprise. The promise of raising defence spending to 2% of GDP within ten years wasn't the result of detailed financial analysis. Rather, it was an artefact of our decimal counting system (hence the decade) and the unofficial NATO benchmark of 2% of GDP. A benchmark that is much more often honoured in the breach than in observance—in 2013 only three of 25 European NATO countries reached that level. More importantly, the promise of 2% in a decade was a signal to the electorate, and to Australia's allies, of the soon to be government's commitment to Australia's defence.

It would have been an extraordinary coincidence if spending 2% of GDP in 2023-24 and beyond was consistent with an ADF of the size and shape currently planned. It was always overwhelmingly likely there would be either too little or too much money.

We do not know how Defence assesses the situation. The publicly released version of the Incoming Government Brief redacted every single word of their advice on the matter. Perhaps it doesn't believe it's going to happen, but it's happy to get what it can in the meantime. As noted in Chapter 2, Defence already quietly increased the target size of the ADF from 59,000 to 59,600 in the transition from the Gillard to Abbott government.

So how much larger would the ADF need to be in order to re-establish a credible balance between capital, personnel and operating costs in 2023-24? If capital investment as a share of the budget was limited to its 16-year average (2002-03 to 2017-18) of 26.3%, and the ratio of operating costs to personnel costs is assumed to remain at its 2023-24 level (0.98), and if all of the additional personnel are uniformed, the ADF would have a strength of 75,200 personnel, fully 15,600 higher than today. Alternatively, if we assume that the ADF is becoming more capital intensive and the investment share rises to 30%, the size of the ADF

would need to be 70,700 in 2023-24 or 11,100 more than presently planned. Given trends in equipment costs and the several looming mega projects on the horizon (submarines and frigates), the latter is probably a better estimate.

No doubt the situation will become obvious in the development of the 2015 Defence White Paper. When it does, we should expect to see two things. First, the size of the force will grow. An extra battalion or two to crew the new LHD amphibious vessels would help bring things into balance, as would a squadron of jump jet variants of the F-35 to reinstate the fleet air arm aboard the LHD. Such possibilities aren't to be discounted. Back in 2008 Andrew Davies and I modelled the sorts of defence forces we could have if we spent around 2% of GDP in the 2020s (see the ASPI paper *Strategic Choices: Defending Australia in the 21st Century*) and we were surprised by just how much capability could be afforded.

Second, with so much money available, we should expect to see proposals of diminishing marginal worth brought forward (see preceding paragraph for examples). Even if prioritisation is done properly, every new initiative enabled by extra funding will be of less value than existing ones. But 2% of GDP will enable some especially marginal propositions to be seriously considered. The most recent candidate is the proposal to retire the Anzac class frigates early so as to allow the AWD programme to roll on into building their replacements. By so greatly loosening the fiscal disciplines on Defence, the challenge for the government will be to contain the potential for far-reaching waste.

So what's the bottom line? I'll resist the temptation to reiterate, yet again, the argument for why the GDP share is a poor basis for deciding upon defence spending. I'm tired of making the argument and I expect others are tired of hearing it. Instead, let me observe that we're firmly into the 'tail wagging the dog territory' wherein an arbitrary number is set to unleash a previously unplanned expansion of the ADF at enormous cost and absent a consideration of what it will add to Australia's security beyond sending a message to allies and friends.

Chapter 4 –Defence Reform

Key Points

Although the savings targets for the Strategic Reform Program have been abandoned, reform continues.

The incoming Abbott government has committed to a 'first principles' audit of Defence.

The National Commission of Audit had some difficult news for Defence.

The government should kick-start the next round of defence reform.

The new government brought with it a renewed focus on defence reform. With the dust only just settled on the 2009 Strategic Reform Program (SRP), it must seem a bit like groundhog day at Defence. But until the government and public have confidence that Defence is efficient, the cycle of reviews, reports and reform will continue.

Central to the emerging reform agenda is the government's commitment to an independent 'first principles' review of how Defence is structured and operates. At the same time, the National Commission of Audit has made substantial recommendations in a number of areas.

This chapter sets the scene for what's likely to come. There are five sections. The first surveys defence reform over the past 35 years. The second summarises the SRP. The third explores post-SRP reform in Defence. The fourth examines the National Commission of Audit. The fifth opines on the challenges and opportunities for the future.

Much of the material in this chapter is taken from (1) a presentation by the author to an Atlantic Council workshop on comparative defence reform held in Ottawa in June 2013 and (2) the ASPI submission to the National Commission of Audit from November 2013. Both documents can be accessed in full at the ASPI website. For even more detail, see previous editions of the Budget Brief and Ergas (*Agenda*, Volume 19, #1, 2012) and Ergas and Thomson (*Agenda*, Volume 18, #3, 2011).

Consistent with the financial focus of the Budget Brief, the emphasis in what follows is on efficiency rather than on behavioural or cultural reforms.

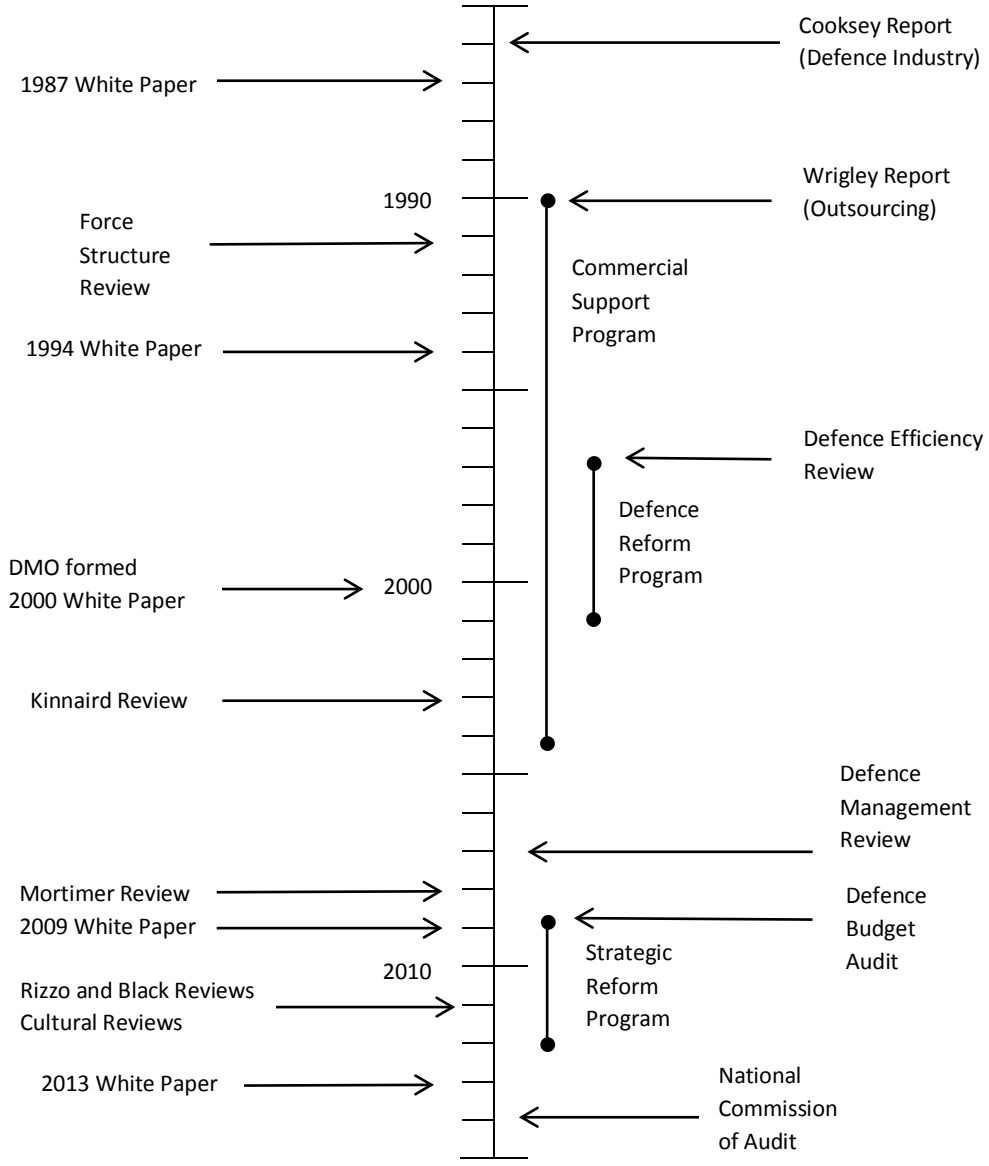
Background

The Australian Department of Defence was created in 1976 by the amalgamation of the previously separate three services and civilian department. As with similar consolidations in the United States and United Kingdom, the goal was to achieve greater inter-service cooperation and, to an extent, impose closer civilian oversight. The resulting organisation was largely a federated structure with central execution of policy development, financial management, force structure planning, science and technology, and capital acquisition. Then, as now, a diarchy of the Secretary and Chief of the Defence Force (CDF) lead Defence with separate and overlapping responsibilities.

In the late 1980s, Defence commenced a long-term program of systematically market testing non-core functions. Under the auspices of the Commercial Support Program (see Figure 4.1) civilian and military activities were compared with private sector alternatives. By the end of the turn of the century around 16,000 positions had been market-tested with around 66% of activities examined transferred to the private sector. Activities included printing, repair and maintenance of equipment and facilities, medical services, technical training, corporate

services, catering and information technology. Around the same time, the government divested itself of its shipyards, munitions plants and aircraft factories. By 2000 the civilian workforce had fallen from 40,000 to 16,300 positions and the military 70,000 to 50,300. These reductions were largely the result of outsourcing of non-core activities previously performed by uniformed personnel and privatisation, notwithstanding that several thousand military positions were also lost as a result of the 1991 Force Structure Review.

Figure 4.1 Defence reform: 1985 to 2014



In 1996, the newly elected Liberal–National government undertook a comprehensive Defence Efficiency Review involving a high-level private/public sector advisory team. The Review led to the Defence Reform Program (DRP), which ran between 1997 and 2001. The DRP:

- adopted a shared services model for a wide range of activities including personnel administration, materiel sustainment, training and education, base/facilities support and information technology

- geographically consolidated some activities and disposed of the resulting surplus property

- accelerated the outsourcing of activities, including many that had been recently consolidated.

The promised savings from the DRP were around $1 billion from a then budget of $10 billion. Although the DRP fundamentally restructured the organisation by embracing a shared services model, the long-term financial impact of the changes is difficult to discern. Most of the savings were used to 'buy-back' 7,000 military positions. But because there were no additional ships, planes or battalions raised as a consequence, the 'buy-back' was as much a 'roll-back' of reform.

In 1999, the Australian-led mission to East Timor heralded a decade of high operational tempo and rising defence funding. With money flowing and attention focused on operational matters, efficiency reforms were put on the back burner and the shared services model eroded by the migration (and in some cases the duplication) of many activities back into the individual services.

In one area, however, reform continued during the 2000s. Beginning in 2000, materiel sustainment and acquisitions were consolidated by the creation of the Defence Materiel Organisation. There followed a series of reforms to capability planning and acquisition precipitated by several embarrassing multi-billion dollar acquisition debacles. Key developments included:

- re-establishment of DMO as a quasi-independent 'prescribed agency' with separate financial accounts from Defence

- the introduction of a two-pass process of project approval that saw the National Security Committee of Cabinet directly involved in the approval of large defence acquisitions

- revamped project governance and professionalisation of the DMO workforce.

The merits of the reformed DMO are difficult to judge given the extended duration of major defence projects, but preliminary data shows some improvement in the delivery of projects on schedule and within budget. On the other side of the ledger, it now takes much longer to conceive and approve projects, and alignment between strategic policy and capability development remains elusive.

Towards the end of the last decade, there emerged two (almost contradictory) propositions about Defence funding. First, there wasn't enough money in projected Defence funding to afford all that was planned in terms of new equipment and attendant personnel and operating costs. Second, Defence wasn't as efficient as it could be, having grown less than optimally efficient after close to a decade of escalating funding. Faced with this situation, in early 2008 the then government directed Defence to find $10 billion of savings over the next decade.

Then in May 2008, the government appointed George Pappas to audit the Defence budget. His report was delivered to the Minister in April 2009. The Budget Audit identified prospective savings of $1.3 billion to $1.8 billion a year based on 2007-08 spending, plus one-off savings of between $218 million and $398 million. On an out-turned basis (taking anticipated inflation into account), the prospective recurrent savings over the decade commencing 2009-10 were between $15 billion and $20.7 billion.

To the work of the Budget Audit were added: (1) the initial work done by Defence to save $10 billion; (2) the results of the 2008 Defence Procurement and Sustainment Review; and (3) the results of a series of internal 'companion reviews' conducted in parallel to the development of the 2009 Defence White Paper. The result was the SRP; a package of reforms and efficiency initiatives to improve Defence's performance and deliver $20.6 billion of savings over the following decade.

The Strategic Reform Program

There were three key elements to the SRP; improved accountability, improved planning, and enhanced productivity. Planned reforms to accountability and planning were examined in detail in the 2009-10 Budget Brief.

Reporting against the $20 billion savings program central to the SRP was abandoned only three years into its planned 10-year life. Although it wasn't said directly, it's likely the savings program became unviable because of deep cuts to Defence funding in the 2012-13 budget coupled with mounting budget pressures in areas that had supposedly been delivering savings.

This is no great loss. As previous editions of the Budget Brief showed in detail, the much lauded $20 billion savings program was implausible and exaggerated, with savings reported against inflated hypothetical business-as-usual baselines. In reality, there was no transferring of savings from one part of Defence to another. The notional savings were built into group budgets back in 2009. Key aspects of the SRP savings are recounted below. To be clear; savings are being achieved and real worthwhile reform is underway, but not on the dollar scale claimed.

Where were the savings supposed to come from?

Table 4.1 summarises the results of our analysis of the initial SRP savings targets as they were announced in 2009-10. Savings were only counted as having been as explained if a moderately complete explanation had been published. In some cases, the explanations offered were either implausible or inconsistent.

Defence reporting of annual targets and achieved savings appears in Table 4.2. As explained in the 2010-11 and 2011-12 editions of the Budget Brief, the quanta of savings reported shouldn't be accepted at face value. For example, the 2011-12 Defence Annual Report says the reported savings were exclusive of $323 million in expenses 'outside the control of SRP management', which seems to imply that Defence was claiming savings while nonetheless spending beyond planned levels. As before, the question of counterfactual baselines clouds the issue of how large savings actually were. As a rule, savings initiatives were reported against SRP baselines without reference to subsequent movements in expenditure.

Table 4.1: What was known and unknown about SRP savings?

	Planned Savings	Explained Savings	Unexplained Savings
SRP savings streams			
ICT	-1,948	-650	-1,298
Inventory	-700	-700	0
Smart Maintenance	-4,827	-4,286	-541
Logistics	-350	-331	-19
Non-Equipment Procurement	-3,767	-3,172	-595
Reserves	-359	-179	-162
Shared Services	-1,864	-706	-1,158
Workforce Reforms (civilianisation of ADF & PSP)	-925	-781	-144
subtotal	**-14,740**	**-10,805**	**-3,917**
Other savings			
Zero-Based Budget	-3,922	-3,922	
Cuts to Minor Capital Program	-238	-238	
Cuts to Facilities Program	-510	-510	
Administrative Savings	-70	-70	
Productivity Savings	-357	-357	
Reduced NPOC	-586	-586	
Cuts to Personnel Initiatives	-238	-238	
subtotal	**-5,920**	**-5,920**	**-3,917**
TOTAL	**-20,640**	**-16,725**	**-3,917**

Source: ASPI Budget Brief 2009-10.

In 2011 and 2012, further savings efficiencies were announced in addition to the original SRP program. Unlike their predecessors, the new efficiencies represented cuts to defence funding rather than the freeing up of funds for redirection within Defence. As such, there's no question of whether the savings were delivered or not; the money was removed from the Defence budget and returned to the Treasury. Further cuts occurred in late 2013.

Table 4.3 lists the cuts made in 2011, 2012 and 2014. The tranches of savings made in the 2012 Budget and 2014 Additional Estimates are distinguished from their predecessors by the absence of any pretence of efficiencies or productivity gains. They're outright cuts to the Defence budget. The key savings under the SRP and subsequent initiatives are captured schematically in Figure 4.2.

With defence funding being cut repeatedly and deeply, the notion of pursuing efficiency savings under the SRP became fanciful. So it was that in 2012, the government abandoned the reporting of SRP savings.

Table 4.2: Reported gross SRP savings for 2009-10, 2010-11 and 2011-12

	2009-10		***2010-11***		***2011-12***	
Reform stream	*Target ($m)*	*Claimed ($m)*	*Target ($m)*	*Claimed ($m)*	*Target ($m)*	*Claimed ($m)*
ITC	49	94	128	27	148	216
Smart Sustainment[1]	263	461	288	326	370	389
Non-equipment Procurement	172	343	177	318	207	148
Workforce & Shared Services	58	-131	171	103	238	156
Reserves			5	-4	28	47
Logistics			6	53	8	0.3
Other Savings	255	255	242	242	286	285
Total	***797***	***1,022***	***1,016***	***1,064***	***1,284***	***1,241***

Source: SLC Question 6, February 2012 and recent Defence Annual Reports

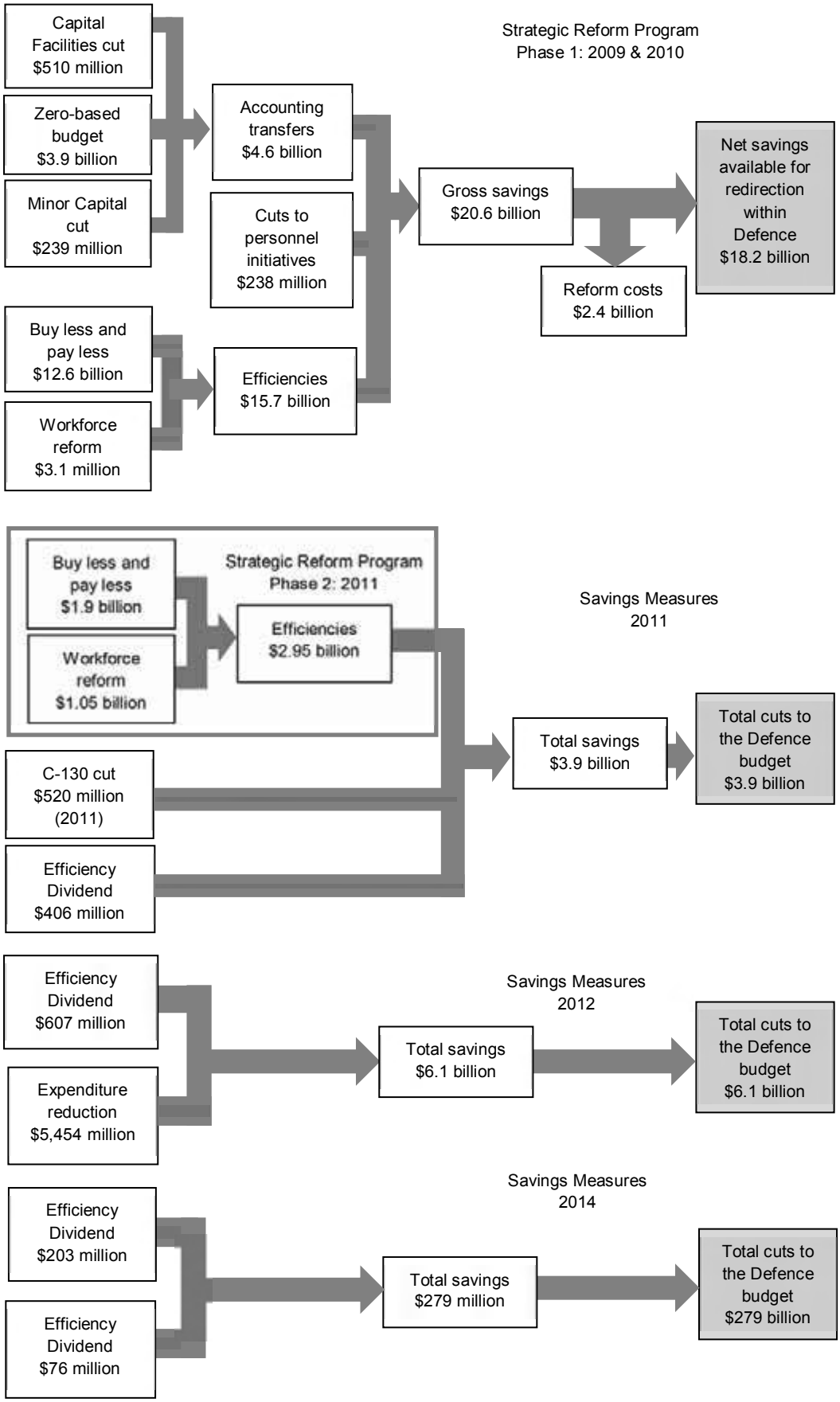
Table 4.3: Further 'efficiencies' and cuts announced in 2011, 2012 and 2014

Initiative	Savings (over 10 years)	Comment
'second phase of SRP-related savings' (announced May 2011)	$2,948 million	Additional efficiencies in Defence's corporate and support functions, including constraining forecast APS workforce growth by 1,000 positions (i.e. not employing extra people).
'increased efficiency dividend' (announced May 2011)	$406 million	No details have been provided on how this efficiency dividend will be delivered.
'buy C-17 instead of two C-130 aircraft' (announced May 2011)	$520 million	Rather than purchase two C-130 aircraft, a single (much larger) C-17 aircraft has been purchased. Inexplicably, Defence lost the funding for the C-130 option and absorbed the cost of the C-17 option.
'one-off 2.5% efficiency dividend' (announced February 2012)	$670 million	No details have been provided on how this efficiency dividend will be delivered.
'expenditure reduction measures' (announced May 2012)	$5,454 million	These are cuts pure and simple, with no suggestion of efficiency gains or dividends.
'Efficiency Dividend' (announced January 2014)	$203 million	No details have been provided on how this efficiency dividend will be delivered.
'Efficiency Dividend' (announced May 2014)	$76 million	No details have been provided on how this efficiency dividend will be delivered.
Total	**$10,277 million**	

Source: Defence Annual Reports and Budget Papers.

Funding rephrasing in 2014 transferred funds to beyond the Forward Estimates. But because substantial funds were also brought forward, it would be wrong to count the shifts as cuts. As explained in Chapter 2, a further $1.2 billion of 'saving and efficiencies' were announced in the 2014-15 budget, including 1,200 fewer civilians and delays to a range on planned initiatives. The money saved will be redirected within Defence for capability.

Figure 4.2: Planned SRP and other savings 2009 to 2014



Reform after the Strategic Reform Program

In early 2011, the entire Royal Australian Navy (RAN) amphibious fleet (1 x Landing Ship Heavy and 2 x Landing Platform Amphibious) were unexpectedly unavailable on the eve of a cyclone hitting the northeast coast of Australia, much to the alarm of the government and public. A subsequent review identified systemic failing in the oversight of ship readiness and the relationship between the RAN and DMO. Confused accountabilities and blurred lines of communication meant the state of the vessels had been allowed to deteriorate to an unacceptable level without senior parts of the RAN, Defence or DMO being aware. Several other factors were at play, including an absence of technical oversight and a low priority accorded to both sustainment and non-combatant vessels. At least as important was the failure to establish a robust customer-supplier relationship between the operators of the vessels (RAN) and the maintainers of the vessels (DMO). Subsequent reforms have seen the oversight of vessel seaworthiness improved and the relationship between DMO and the RAN put on a clearer and less ambiguous standing.

Also in early 2011, an unfortunate incident of personal misbehaviour at the Australian Defence Force Academy morphed into a scandal that stressed civil-military relations at the highest level and raised serious questions about misconduct and sexual harassment in the defence force. There followed a series of 'cultural reviews' that examined everything from the roles of social media and alcohol in the military to the treatment and career management of female service-members. The end result was a package of reforms designed to prevent misconduct and ensure a safe and respectful environment for all personnel.

Notwithstanding the demise of the SRP, reform continues on multiple fronts in Defence. Those two areas stand out as being important from the perspective of achieving efficiency and assuring capability. Specifically, reforms to shared services under the Chief Operating Officer (COO) and materiel sustainment under DMO are ongoing. Although the reforms now underway in both areas first arose under the 2009 SRP, they're effectively bedding down the organisational structure created back in 1997 by the DRP. In each case, the latest reforms are correcting problems that developed at the interface between the designated internal suppliers and their customers elsewhere in Defence and in particular with the military (in economic jargon, the problems reflect principal-agent issues between internal Defence suppliers and customers).

In the case of non-materiel shared services (personnel, IT, non-materiel purchasing, finance) the problem was that many areas either refused to fully surrender responsibility to central providers or else duplicated activities that were supposed to be done centrally. This phenomenon was most acute in the case of personnel. The root cause was a lack of trust in the central service providers.

The opposite malady emerged in the case of materiel sustainment. Because of the scale and expense of repair and maintenance activities, the military had no choice but to transfer the activities in full to DMO. Having done so, it initially took insufficient interest in the cost of what it consumed and instead focused on service standards—but then only in part because responsibility for failure could always be put back onto DMO, as the failure of the amphibious fleet in 2011 demonstrated.

Shared Services

The 2009 SRP anticipated substantial savings (around $140 million a year) from reforms to the delivery of non-materiel shared services, including; personnel policy and administration, base support, non-materiel procurement and finance. A further $190 million was anticipated from reforms to information technology and communications. In 2011, McKinsey and Company reviewed the delivery of shared services in Defence and identified possible efficiency measures. Impetus for reform grew in 2012 when the government imposed a cut of 1,000 civilian positions (from a workforce of around 21,000). This came on top of a 2011 decision to cancel planned growth of 1,000 additional civilian positions. The creation of the powerful COO position in 2011-12 was probably an important enabling step on the path to subsequent shared services reform. In any case, reforms begun under the SRP have accelerated significantly over the past two years.

Although reforms vary from sector to sector, the basic underlying approach has been to consolidate activities and then streamline processes and systems. The benefits are twofold. First, consolidation reduces duplication and generates economies of scale and scope—in some cases explicitly involving the creation of centres of expertise. There are also benefits for the individuals involved, including opportunities for greater specialisation and more promising career paths. Second, consolidated service delivery provides higher levels of transparency (for senior management) and the opportunity to maintain consistent policies and service standards across Defence. Consolidated services also facilitates Defence-wide system rationalisation and the introduction of web-based business interfaces.

An important step in the consolidation of shared services has been finding ways to assure service delivery to customers. This has been achieved by having some staff pooled within the delivery agency, some situated within the delivery agency but assigned to specific parts of Defence, and some embedded within the part of Defence they serve. The approach adopted varies from activity to activity, depending on the needs of the customer. To support the move to greater reliance on shared services, considerable effort was put into change management, including wide consultation and a deliberate communications strategy involving newsletters, speaking points and web-based resources.

Reform in the personnel and finance areas is advancing with the introduction of continuous improvement programs. In the finance sector, a system of Group Chief Finance Officers (GCFO) has been established, with GCFO reporting to both their respective group head and the Chief Finance Officer (CFO). (Unlike most shared services reform where the COO has the lead, the CFO has taken the lead in the finance sector.) Financial services that have been consolidated include; general transactions and accounting, budgeting and financial reporting, financial policy, governance and audit coordination, treasury, banking and tax, and project finance. In the personnel sector, a large number of functions have been consolidated (though some aspects of military personnel management remain within the individual military services). Key developments include; establishing a ‘business partner’ capability to provide strategic HR advice to executives in groups, implementing a regional people service model to support supervisors and individuals across Defence, creating a new personnel website on the Defence intranet and commencing a web-form redesign program

with electronic signature and work-flow capability, and eliminating duplication in case management, establishment management, graduate recruitment and workforce planning.

Smart Sustainment Reform

The military Services rely on DMO to repair and maintain their equipment and platforms and provide munitions and other consumables such as petrol, oils and lubricants. In recent years, materiel sustainment has accounted for around $5.6 billion of the $25 billion annual Defence budget. When arrangements were originally put in place, the three Services effectively received sustainment as a 'free good', with the sustainment budget going directly to DMO. Arrangements between the Services and DMO are set out in Materiel Sustainment Agreements. In the latter half of the last decade, the sustainment budget began to be reported against the individual Service budgets. At first this was a nominal accounting change, but over time the Services have become much more involved in decisions about performance levels and cost-capability trade-offs.

At the heart of recent and ongoing reforms to materiel sustainment is the shift to a situation where the military Services are exposed to the opportunity cost of the decisions they make regarding sustainment of their capabilities. Or to put it another way, the Services now have the ability to reallocate savings achieved in sustainment to other ends, eg prevent reduction in capability. Naturally, the move from receiving 'free goods' to being exposed to 'opportunity costs' has driven cost-conscious behaviour.

There's now a six-year campaign to drive efficiencies across the 100 or more fleets of assets under management. When 'smart sustainment' was first rolled out in Defence in 2009, the focus was on astute contracting and process improvement, but as the military Services have become more involved, the emphasis has shifted to demand management and process simplification. At the same time, DMO has sharpened its contracting and business analysis skills (including simulation and modelling) to become a centre of expertise for sustainment services. As with non-materiel shared services, the consolidation of skills allows for greater specialisation and more viable career paths.

Engagement between DMO and its customers in the Services is ongoing and maturing. There's a six-month senior level performance management (fleet screening) schedule that reviews how business is being done in separate sustainment areas. This process is underpinned by more frequent performance reviews at lower levels between DMO and the Services. One of the key factors has been greater precision in the definition of demand. By being clearer about what's required, DMO can plan better and suppliers can optimise their capacity and not charge a risk premium to cover unanticipated demands. Of course, contracts include surge provisions that can be activated in the event of foreseeable demand range and military contingency.

Specific measures to cut the cost of sustainment include; contracting for outcomes such as platform availability rather than sustainment activities, progressive adoption of e-business for purchasing, streamlined simple procurement for routine goods and services, greater use of panel arrangements for procurement, consolidated purchasing of common items and transferring inventory management to suppliers in the context of performance-based contracts.

The next step in sustainment reform will be to move more towards a whole-of-life asset management perspective that ensures the cost-effective delivery of capability across both acquisition and sustainment.

Defence and the National Commission of Audit

As already mentioned, the encouraging progress underway on shared services and smart sustainment in Defence reflects bedding down of the business model created by the 1997 DRP. For the moment, the new government's plans for defence reform remain unclear, and early suggestions of radical changes to DMO (i.e. outsourcing) appear to be on the back-burner pending the promised 'first principles' review. In the meantime, the government's National Commission of Audit (NCoA) has made a series of far-reaching recommendations about what to do with Defence.

The NCoA was established in October 2013 by the incoming Abbott government, and its reports were made public in April 2014. ASPI made a written submission to the NCoA in late 2013, and in a number of key areas the Commission's report reflects ASPI's analysis and recommendations. In what follows, the Commission's formal recommendations and suggested actions made regarding Defence are explored. We begin with the Commission's Recommendation 24, which deals directly with Defence.

Recommendation 24: Defence

Ensuring the nation's defence and security is a core function of the Commonwealth Government. The Commission recommends a number of steps be taken to improve the efficiency, effectiveness, accountability and transparency of Defence spending through:

a. ensuring preparation of the new Defence White Paper identifies capability options and associated costs for different sets of strategic risks. As part of this process, the Government should also assess the balance of strategic and fiscal priorities and how this compares with the commitment to increase Defence expenditure of 2 per cent of GDP within a decade;

Without doubt, and in two ways, this is the most important recommendation made by the Commission regarding Defence.

First, from a budget perspective, it politely makes the point that the government's commitment to increase defence funding to 2% of GDP is suboptimal policy. As in any area of public spending, expenditure can only be justified by comparing costs (including opportunity costs) and benefits. For defence, this requires a careful examination of the strategic risks Australia faces, the cost of developing military capabilities to counter those risks and the best means to realise the attendant outcomes. Absent such an analysis, there's no way to tell whether 2% of GDP is overly generous or vastly inadequate. Indeed, the 2% figure focuses on the resources consumed by Defence rather than the outcome sought. It may be that Australia needs to spend 2.6% of GDP to be safe, or that 1.7% of GDP would be more than adequate.

Second, from a strategic perspective, it rightly points out that the ADF should be built to counter strategic risks. Though this sounds like telling defence's planners to suck eggs, it's

anything but. A clear and logical link between strategic policy and the priorities for equipping and developing the ADF is yet to emerge.

b. as a pre-condition for setting any new funding profile for Defence under the White Paper, the Government should ensure that Defence improves the effectiveness and transparency of expenditure by improving Defence budget arrangements and governance, capability development and delivery;

In each of the areas cited—budget arrangements, governance, capability development and delivery—there's plenty of room for improvement, but experience shows that gains in these areas are difficult and time consuming to achieve. So while withholding additional funding would incentivise progress, it would also risk damaging a defence force struggling with large funding cuts made over the past few years. As a practical matter, therefore, reform and development of the ADF should proceed in parallel. Incentives to achieve effective reform within Defence can and should be created by the government holding senior executives and military officers to account for results.

c. transparency and control for government should be significantly improved by stronger budget processes including through the Expenditure Review Committee. For new capital, in particular new equipment projects, this would include holding funds in separate budget allocations and releasing them as projects are approved. Such expenditure should be treated as administered funding rather than departmental funding, so that there is greater financial control and scrutiny of this expenditure through established budget processes;

This particular recommendation roughly translates into 'give the Department of Finance more control over how Defence spends money' (remember that the secretariat for the Commission was drawn largely from Finance). On the plus side, this would provide a higher level of scrutiny over Defence expenditure than is presently the case. On the minus side, it would impose additional processes and paperwork. It's not *a priori* clear that the benefits of the former would outweigh the costs of the latter. If this recommendation is accepted, the government will have to ensure the Department of Finance and the other central agencies are adequately resourced to add value rather than just impose delays.

d. a new ministerial directive to the Secretary of the Department of Defence and the Chief of the Defence Force specifying their separate and shared responsibilities and holding them individually accountable for Defence performance;

The Commission provides an example of what the directive might contain. Ministerial directives along these lines have come and gone in the past. To the extent they resist designating separate responsibilities to the Secretary and CDF (apart from the exclusive command role of the CDF) they're probably harmless. In the view of this author, however, the *1903 Defence Act* says all that needs to be said. When all is said and done, the Minister's ability to hold the Secretary and CDF to account is ultimately only limited by his/her willingness to do so rather than by the absence of a formal directive.

e. reintegrating the Defence Materiel Organisation into the Department of Defence, with the size of the Defence Materiel Organisation being significantly reduced and with a renewed

focus on contract management as opposed to project management;

This recommendation has several parts, which need to be dealt with separately:

Reincorporating DMO into Defence. Few reform issues raise sensitivities greater than those to do with institutional boundaries. It is as natural for DMO to fiercely protect its quasi independence, as it is for Defence to want to extinguish that independence—irrespective of the merits. Some care is therefore needed to disentangle the substantive arguments for and against.

An overarching point needs to be acknowledged from the start; the bringing together of acquisition and sustainment in DMO has been a success. Although the transition from acquisition to sustainment remains less than perfect (e.g. there is still no sustainment arrangement for the Air Warfare Destroyer presently under construction) things are much better than in the past. Moreover, there are natural benefits from pooling allied commercial and technical skills across acquisition and sustainment. Of course, none of this was a result of DMO being a prescribed agency. DMO was formed in the early 2000 but only became a prescribed agency mid-decade. So what is it that has been achieved by prescription?

Several worthwhile things have occurred since DMO became a prescribed agency. Transparency and reporting have improved substantially, sustainment efficiency has been boosted, the workforce has been professionalised, and gateway reviews have been introduced for major projects. There changes and other reforms have helped improve the performance of project outcomes as assessed by the Australian National Audit Office (ANAO).

But while the independence brought by prescription has certainly helped drive these reforms, none of them were contingent upon it. Perhaps the only change which can be confidently (but not entirely) attributed to prescription is the development of business-like acquisition and sustainment agreements between the Services and DMO. That said; it's unlikely that DMO's independent voice in advising the government about projects risks would have emerged if DMO had remained within Defence.

Conversely, prescription has failed to deliver the workforce flexibility sought by both the Kinnaird and Mortimer reports. That is not meant as a criticism of either DMO or prescription. For better or worse, DMO was never permitted to manage its workforce along the lines envisaged—perhaps for good reason given the disruption it would bring to the insulated labour market of defence-savvy people in Canberra. In any case, the core imperative behind prescription was never allowed to arise. In this sense, the prescription experiment was half-baked. At the same time, prescription has added transaction costs and duplicated some overheads—though the extent should not be exaggerated.

The future of DMO and its relationship with Defence will be a core issue for the promised first-principles review. Unless the government wants to give DMO the power to manage its own workforce (which would bring both benefits and risks), reincorporation back into Defence is probably on the cards. The challenge will be to retain recent gains in the process.

Significantly reduce the size of DMO. It's certainly possible, and likely worthwhile, to reduce the size of DMO. There are several ways this can be achieved. First, activities can be transferred to the private sector—for example by moving to productivity and performance-based sustainment contracts. Second, the workload can be lessened by reducing the number of Australia-unique acquisitions. Third, labour productivity can be improved through reduction in bureaucracy, increased skilling and incentivising more commercial practices—not simply through salary but in ways that actively encourage individuals to drive performance. Fourth, processes and structures can be refined. In each case, the reduction in staff numbers is a consequence rather than a reform in and of itself. No doubt the Commission had these sorts of action in mind.

Renewed focus on contract management as opposed to project management. To the extent that future acquisitions are limited to off-the-shelf options, a shift from project to contract management is certainly possible. But so long as acquisitions are imperfectly specified at the time of contract it'll be necessary for DMO to work closely with suppliers throughout the acquisition process—i.e. something more akin to project management than contract management. Perhaps it's a question of semantics. But there's no reason to believe the taxpayers' interests would be well served by adopting a minimalist approach to DMO's role in oversighting multi-decade, multi-billion dollar acquisition programs in every instance. A crucial consideration is whether DMO is best skilled to perform its oversight role and not duplicate the suppliers' roles. From another perspective, a capable DMO is needed to ensure the smooth transition from procurement to efficient capability sustainment.

f. establishing a more professional Capability Development Group (CDG) within Defence with an increased use of project development professionals skilled in cost and risk assessment;

Agreed. Many of the problems with defence projects begin at conception when newly posted 'desk officers' are given the task of developing capability requirements and acquisition strategies with inadequate background. The proportion of long-term civilians in CDG should be increased and career development strategies in place to ensure the development of individual and organisational expertise. Alternatively, military personnel could be given longer tenure, but this would beg the question of why they need to remain in uniform and receive all the benefits involved if their long-term trajectory is an office on Russell Hill.

g. reducing the staffing size of Defence headquarters in Canberra, including senior staff, to 1998 levels;

Agreed. The number of senior and middle management positions (civilian and military) in Defence has exploded over the past 15 years in tandem with similar growth across the APS (see Chapter 2.3). But because the many military headquarters outside of Canberra have been subject to the same phenomenon, they should be subject to the same stringency.

h. Defence publishing performance indicators that reveal progress with reform, including the 'teeth to tail' ratio and the additional cost of unique and Australian built procurement decisions.

Transparency is the surest route to ensuring Defence is efficient. Unfortunately, disclosure is uneven across the range of activities Defence undertakes. In some areas there have been improvements recently—for example access under Freedom of Information—in others, Defence continues to hide behind a veil of secrecy that obscures its actual performance and impedes accountability. Without strong Ministerial direction, it's unlikely Defence will become more transparent of its own accord. At a minimum; current outcome reporting could be augmented with performance efficiency measures of sufficient granularity to allow benchmarking against the broader economy.

Elsewhere in the Commission's report, a number of other recommendations relevant to Defence have been made. These are explored below.

The privatisation of both ASC Pty Ltd and Defence Housing Australia.

As a practical matter, the sale of ASC can't proceed until the government decides how it will deal with the vexed problem of naval shipbuilding in general, and the future submarine in particular. There's no in principle impediment to the sale of Defence Housing Australia.

However, unlike the sale of Qantas, Telstra or the Commonwealth Bank where an effective private market already existed, the government is the sole customer for submarines and defence housing. As such, care needs to be taken to put in place the necessary arrangements to allow it to properly regulate the resulting privately owned monopolies it'll have to deal with. In the case of DHA, this might best be done through continued ownership.

Close the Military Superannuation and Benefits Scheme (MSBS) to new entrants, with a new scheme established based on an accumulation plan opened for new Australian Defence Force members;

This recommendation was implemented in the 2014 Budget and is reasonable. Defined benefit schemes for Commonwealth public servants were closed almost a decade ago (July 2005). Apart from politicians, everyone else takes their chances with accumulation schemes subject to market volatility and erosion by inflation. For ADF members serving for shorter durations, the new accumulation scheme will offer advantages over the now closed schemes.

Since 2005 the Skilling Australia Defence Industry Program has provided funding to improve the quality and quantity of skills training in businesses that could seek defence contracts. The continued funding of this grants programme should cease, consistent with the Commission's recommendation in its Phase One Report to limit industry assistance to areas of genuine market failure. and The Commission recommends the Defence Services Homes Insurance Scheme and its advisory board be abolished. There is an established and competitive insurance market. There is no compelling rationale for continued government involvement in this area.

The merit of these recommendations is self-explanatory.

The Defence Science and Technology Organisation should be assessed for its outsourcing potential.

The issues surrounding the outsourcing of DSTO are many and contested. With the caveat that at least some functions would need to be kept in-house, there's no reason not to assess the potential for transferring some DSTO tasks to the private sector. The UK has done so successfully and the private sector has long played a central role in US defence science and technology.

Recommendation 7: Public sector efficiency – improved spans of control
Average management structures in the Australian Public Service are top heavy, particularly at the Executive Level 1 and Executive Level 2 classifications. The Commission recommends that spans of management control be improved by requiring:

a. eight major departments* and agencies to prepare plans that report on current management structures and spans of control, and opportunities for improvement, immediately for Cabinet consideration; and

b. all portfolio secretaries and agency heads to prepare plans to improve management structures and spans of control for ministers within 12 months.

*Department of Defence, Department of Human Services, Australian Taxation Office, Department of Immigration and Border Protection, Department of Health, Department of Social Services, Australian Bureau of Statistics, and the Department of Agriculture.

Recommendation 12: Performance evaluation – rolling 'audits' of agencies

The performance of individual government agencies is central to delivering effective and efficient government. The Commission recommends:

a. a small number of rolling Portfolio Agency Audits be undertaken each year, led by an independent person or panel, or the Department of Finance, to comprehensively assess efficiency and effectiveness across all aspects of an agency's operations, programmes and administration, with:

i. results and any recommendations to be presented to the portfolio minister and the Minister for Finance, and considered as part of the annual Budget process; and

ii. agency heads to be responsible for implementing recommendations agreed by government; and

b. that the Department of Defence be the subject of the first Portfolio Agency Audit, led by an independent person or panel.

and

The Commission supports the Government's commitment to undertake a first-principles review of Defence's departmental structure and major processes. Opportunities for further rationalisation of 25 Defence non-principal bodies should be considered in this context.

All up, there are three separate reviews of Defence proposed in the near term; an independent 'first principles' review, a Portfolio Agency Audit and an examination by the Secretary of departmental management structures and spans of control. Unless rationalisation occurs, the halls of Russell Offices will have clipboard wielding consultants bumping into each other and getting in the way of the natural inhabitants trying to do their job.

The various recommendations about staff numbers and spans of control point towards a fundamental downgrading of positions across Defence—a rollback to the sorts of management structures that prevailed prior to the level/rank inflation of the 2000s when money was easy. The impact would be profound. Deputy Secretaries would become First Assistant Secretaries, EL2 would become EL1, Major Generals would become Brigadiers, and Group Captains would become Wing Commanders. Achieving such a fundamental realignment of levels to tasks would be difficult and disruptive. On the civilian side, it would require positions to be spilled and readvertised. In doing so, a reassessment of individual positions based on the standards set by the Australian Public Service Commission would ensure consistency across Defence and the APS more broadly.

Next steps—challenges and opportunities

Like any good team of consultants, the Commission has recommended further reviews. The first question for the government is whether to take action now on some of the Commission's recommendations or to wait until after the planned reviews(s) of Defence.

In many instances there's no reason to wait. Many of the recommendations are effectively discrete stand-alone initiatives. Other recommendations are so closely interdependent as to have to wait until the promised review(s) of Defence are complete. These include the role and attendant size of DMO, the structure and size of Service headquarters, and Defence's overall management structures, spans of control and accountability.

With the Commission's report now delivered and public, there's no reason to delay action any further. Other agencies will be reorganising and downsizing following the budget. If the government is serious about defence reform, it needs to get the ball rolling as soon as possible. Here are some suggestions for what to do.

1. Commence the promised review/audit of Defence as soon as possible. There's no point running multiple reviews; consolidate what needs to be done into a single exercise. Publish the terms of reference, set a deadline, invite public submissions, and get on with it. Key issues for the Review include:

- Defence's structure, processes and staffing, including all aspects of the civilian and military workforce. While it might be politically expedient to quarantine military positions from scrutiny, they represent more than three-quarters of the Defence workforce and they're the most expensive on a per capita basis. The multiple military headquarters maintained by the ADF are likely to be every bit as overstaffed as those on Russell Hill.

- The future of Defence's shared services business model and the role of the Service Chiefs. There's an inherent tension between the efficiencies delivered by organisation-wide shared services (such as ITC and facilities maintenance) and the clearer accountability of having the three Services manage their own support in-house. Given the progress made in recent years, I think the best option is to further exploit a shared services model; albeit a more pervasive approach than has been accepted to date. Others believe returning control to the Services is imperative—particularly in the case of materiel sustainment. This issue must be resolved as the absence of decision encourages a focus on competing positions—not efficiency.

- The future of DMO. Increasingly more radical schemes for revamping DMO have been doing the rounds in the media. The government needs to develop a plan for DMO, either within the forthcoming broader review of Defence or as an ancillary exercise. In doing so, it will be important to consult closely with industry (while remembering it has a vested interest in creating a pliant and weak commercial counterparty).

- Performance reporting. Defence's efficiency is highly dependent on the performance and funding regime between the government and Defence. The design and details of the regime should be a key outcome of the forthcoming review.

2. Consider the discrete recommendations from the Commission and where possible make quick decisions. Work can begin on discrete tasks such as revamping Capability Development Group, assessing the outsourcing potential of DSTO, closing the Military Superannuation Benefits Scheme, ending the Skilling Australian Defence Industry program and, if we really have to, issuing a directive to the Secretary and CDF. And it's never too late for Defence to be more transparent and open about its performance. All of these matters could be progressed, and some concluded, relatively quickly. If the government rejects a recommendation, it should say so.

3. The Defence White Paper along with whatever review of Defence emerges have the potential to see activities 'delayed pending'. The government should resist this tendency as far as possible. For example and in particular, momentum should be maintained in the future submarine program.

4. Remember that Defence is full of hard-working capable individuals who are committed to their job. A lot of good work has been done in recent years and many of the best prospects for improved performance lie in continuing work already underway.

5. Successive reviews have bemoaned the absence of accountability within Defence. Over the years, all manner of bad outcomes have been blamed on poor accountability. Although organisational structures and processes can both impede and facilitate accountability, in the final analysis accountability is something one person imposes on another, starting from the top. No amount of reviews will change that fact. If the government wants accountability *within* Defence, it needs to start imposing accountability *on* Defence. No need to await a review, start tomorrow.

Chapter 5 – International Defence Economics

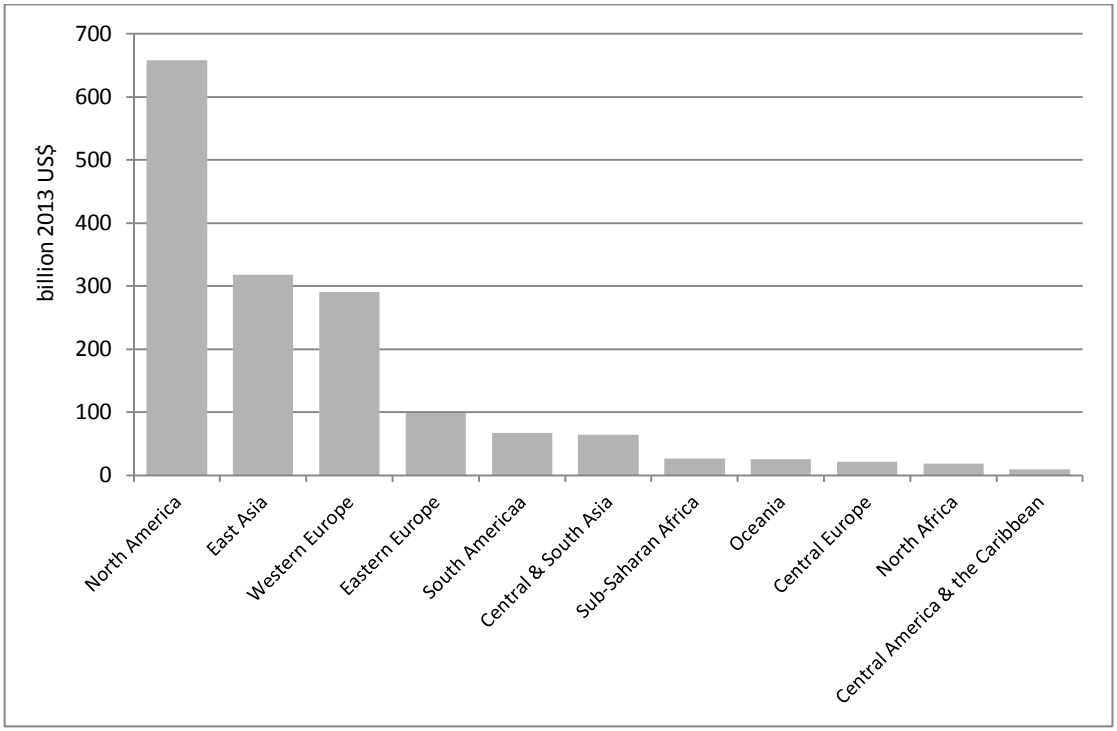
This chapter is divided into three parts. The first examines key international defence spending trends. The second explores Australian defence spending in an international and historical context, and the third explores the continuing impact of the Global Financial Crisis (GFC) on countries' abilities to spend on defence.

Throughout this chapter, defence spending statistics from a variety of source are used. Given the unresolvable questions of definition and reliability, one source is usually as good as another. For that reason, the most convenient source of data has been chosen to allow for a consistent comparison in each case.

International defence spending

According to the Stockholm International Peace Research Institute (SIPRI), the world expended a total of US$1,739 billion on defence in 2013, equivalent to around 2.4% of global GDP. With the exception of China, the bulk of the spending occurred in the developed economies of North America and Western Europe, with East Asia also figuring highly in the data, see Figure 5.1.

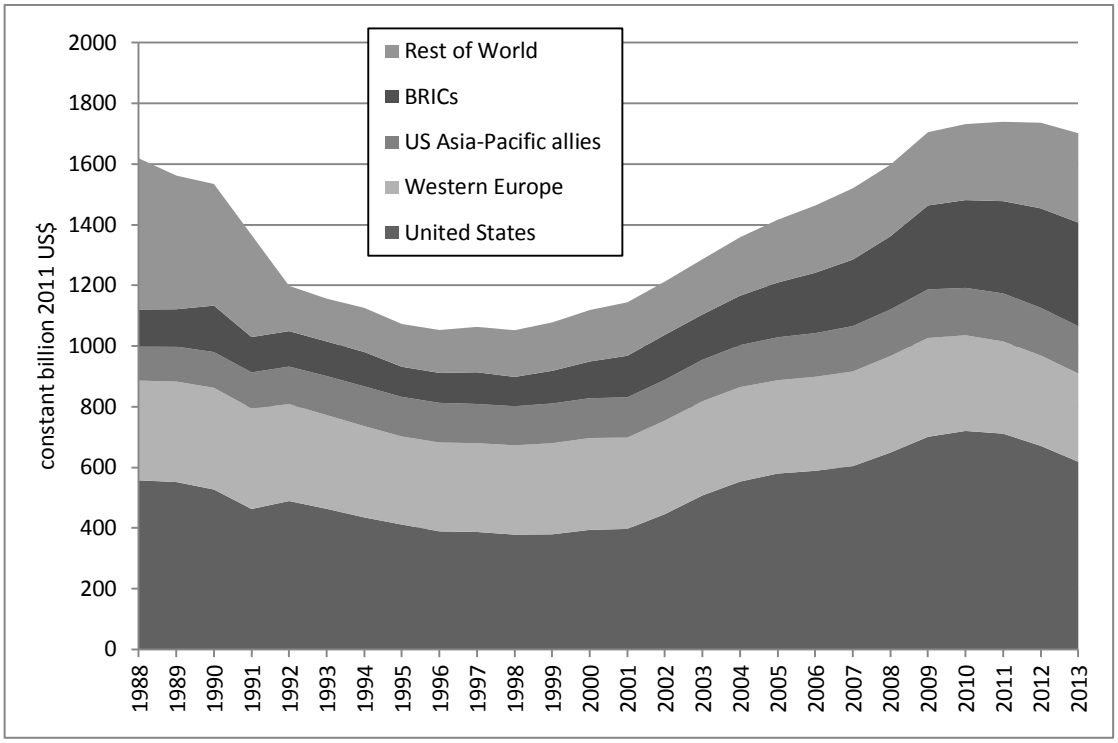
Figure 5.1: Geographic distribution of defence expenditure 2013



Source: Stockholm International Peace Research Institute (SIPRI) Military Expenditure Database 2014 edition, www.sipri.org.

Global defence spending from 1988 to 2013 is graphed in Figure 5.2, where 'BRIC' refers to the emerging powers of Brazil, Russia, India and China, and the US allies outside of Europe are Australia, Canada, Japan, Korea, New Zealand and Taiwan. As can be seen, the peace dividend following the end of the Cold War resulted in a contraction in global defence expenditure of around 30% over a decade. From 2001 to 2009, the trend reversed as the United States mobilised following the attacks 9/11.

Figure 5.2: Global defence spending 1988 to 2013



Source: Stockholm International Peace Research Institute (SIPRI) Military Expenditure Database 2014 edition, www.sipri.org. Russian spending interpolated for 1991. Chinese spending extrapolated for 1988, similarly for Russia pre-1992.

The United States dominates global defence spending, and the US-led invasions of Afghanistan and Iraq gave rise to a decade-long increase in the global figure. In 2013 the United States accounted for 36.4% of global defence spending, and once its friends and allies are taken into account the 'West' as a whole accounts for just over 62.6%. However, around 2010, global defence spending peaked as expenditure in the United States and other developed nations fell.

It is now clear that the world (or at least the developed world) is experiencing another downward swing in defence spending. The United States and most of the countries of Western Europe are projecting either insipid growth or declining defence expenditures out to the middle of this decade. In part, this reflects a mini peace dividend from the drawdown of Western forces in Iraq and Afghanistan. At least as important, however, are the mounting fiscal pressures across developed economies.

A combination of rising social spending and the legacy of crippling debts due to the 2008 GFC are forcing many countries to reconsider the priority for defence spending. Western Europe in particular is facing a long-term fiscal crunch due its ageing population; with tax revenues falling and pension costs rising, something has to give. In the absence of a serious deterioration in the strategic situation in Europe, it's likely that cuts to defence spending will be the most politically expedient course of action for many European countries in the years ahead.

But not all trends are downwards. Falling year-on-year defence spending by the United States (-7%), Western Europe (-2.4%) and other US allies (-0.8%) in 2013 was offset by growth in the BRICs (+4.2%) and the rest of the world (+4.4%).

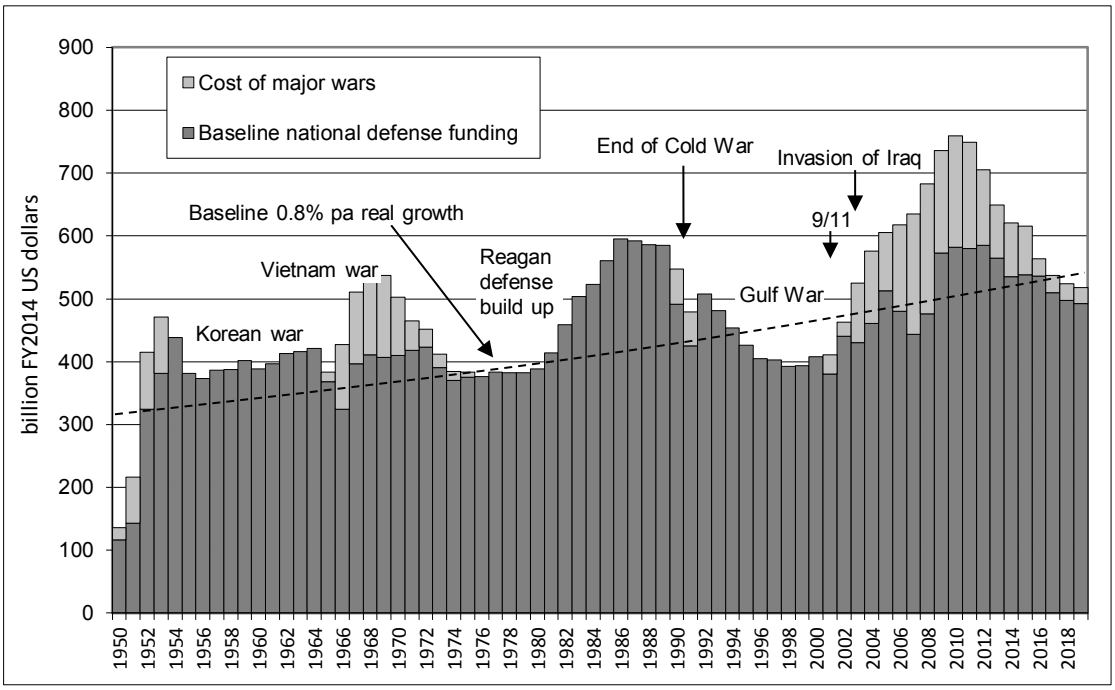
The United States

After a decade of strong growth, the US defence budget has moderated over the past five years and begun to fall. And the trend is likely to continue; until 2021 US defence spending is theoretically capped under the Budget Control Acts of 2011 and 2013 (sequestration) in response to mounting fiscal pressures—though some remission has occurred.

Over the past couple of years, the cuts have been accommodated through reduced personnel numbers (and remuneration), base closures, acquisition deferrals, and the early retirement of some assets. Most recently, sequestration has put pressure on the readiness of the US military by reducing the money available for operations and maintenance.

Further cuts may be necessary. Figure 5.3 shows historical US defence spending and the National Defence Budget Estimates for FY2015 out to 2019. The actual level of defence spending post-2014 is uncertain, higher and lower levels of defence spending than depicted are possible.

Figure 5.3: US defence spending 1950 to 2019



Source: FY 2015 US budget papers (Tables 7.1 and 7.2) and various sources for the cost of major wars.

Even if US baseline defence spending returns to its long-term historical trend of 0.8% annual real growth (relative to the US CPI), the size of US armed forces will continue to decline. Over the past six decades, the annual cost of maintaining a US Navy vessel in service has risen by around 3% above inflation. Over the same period, the costs of aircraft and soldiers have risen in real terms by similar amounts. As a result, the strength of the army has more than halved and the numbers of aircraft and ships have been reduced four-fold since the 1950s (see ASPI Policy Analysis #56, *Trends in US defence spending: implications for Australia,* 2010).

Consequently, although the United States remains the most powerful military force on earth, its ability to mount large-scale operations is slowly eroding, along with its capacity for concurrent operations.

The People's Republic of China

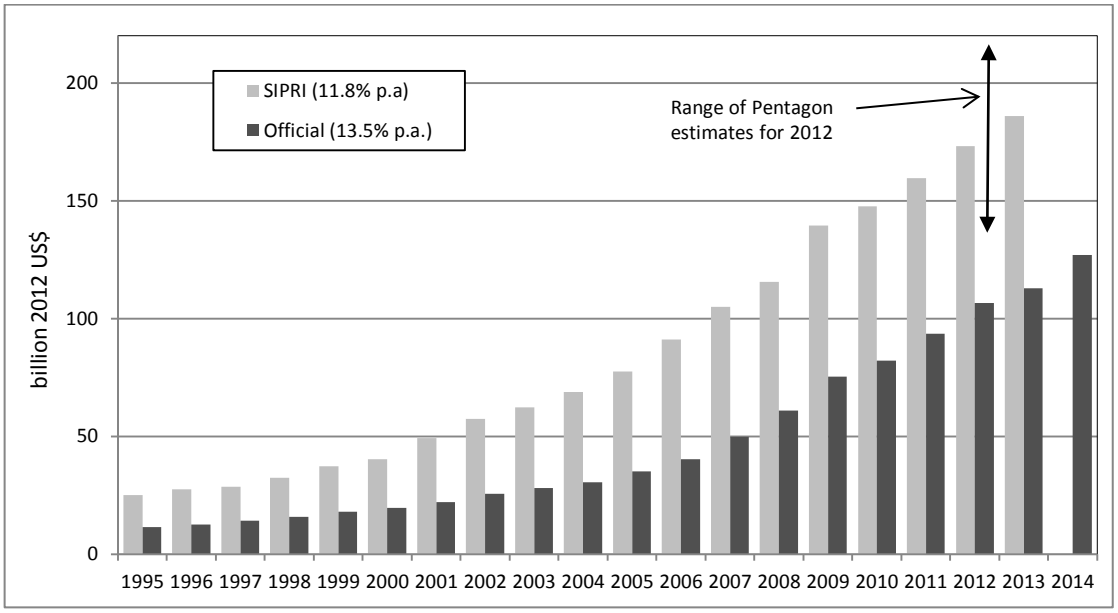
China has enjoyed rapid economic growth since the early 1990s. Over the same period, defence spending has grown apace. Controversy surrounds the scale of Chinese defence spending. US estimates of Chinese spending are substantially higher than the official figure. Independent estimates fall somewhere in between, see Figure 5.4.

By any estimate, Chinese defence spending is rising rapidly; by around 12% to 14% per year above inflation over the past decade, as measured in US$. In terms of Chinese currency, the growth rate averaged 12.7% between 2002 and 2011 (the ongoing appreciation of the RMB and differential inflation means that the growth rate differs from that calculated using US$). Because defence spending growth has been matched by strong growth in the Chinese economy, the defence share of GDP has remained below 2%—at least according to official figures.

Although China is often criticised (including by Australia) for not being transparent enough about its military build-up, its biannual defence white papers are reasonably clear and largely consistent with what can be observed; China is developing the military capability to exclude the United States and its allies from its maritime approaches with a particular focus on operations against Taiwan. This is reflected in a focus on developing and modernising what the US term 'anti-access/area denial capabilities'.

To a lesser extent, China is investing in power-projection assets—including an aircraft carrier—to protect its sea lines of communication and assert its interests further afield. By the end of the decade, China will have the ability to deploy and sustain a modest joint force, including several battalions on low-intensity operations far from China.

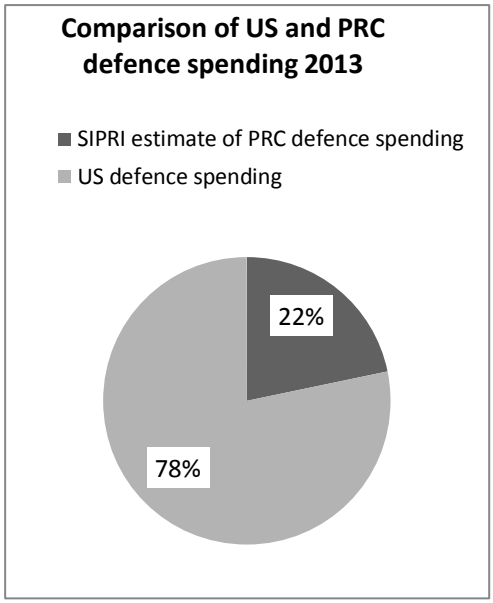
Figure 5.4: Chinese defence spending 1990 to 2014



Sources: Analysis of data from SIPRI Military Expenditure Database 2014, www.sipri.org; Pentagon Report to Congress on the Military Power of the People's Republic of China, FY2013.

Comparing the United States and China

Much has been said lately about the changing economic and strategic balance between the United States and China. Here's some numbers to put things in perspective.



According to the World Bank, the United States economy (US$16.2 trillion) was 2 times larger than China's (US$8.2 trillion) at market exchange rates in 2012. If China's economy grows at 7% per annum and the US at 2.5% per annum, it will only take 15 years for economic parity to be reached in 2027.

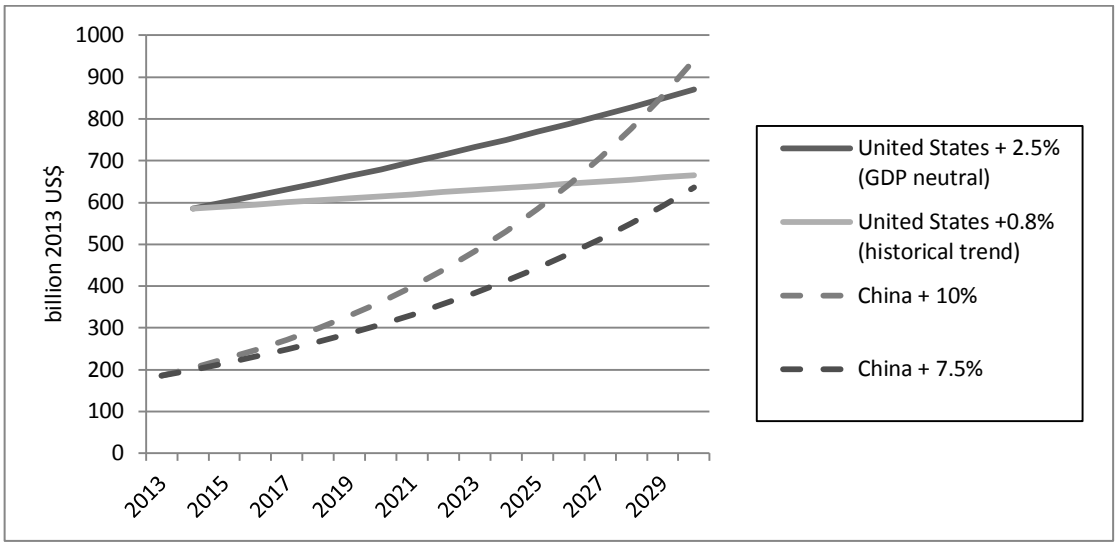
The raw statistics for recent military expenditure by the United States and the People's Republic of China are shown in Table 5.1. Note that China's smaller GDP share gives it a relatively greater capacity to increase defence spending.

Table 5.1: United States and Chinese defence spending circa 2013

	Baseline defence expenditure 2013/2014 US$	Defence expenditure percentage of GDP	Rate of growth
United States (official 2014)	586 billion	3.6%	0.8%
China (official 2014)	132 billion	-	13.5%
China (SIPRI estimate 2013)	186 billion	2.0%	11.8%

Plausible defence spending trajectories for the United States and China are plotted in Figure 5.5 based on the latest SIPRI estimate of Chinese spending (2013), and using growth rates commensurate with historical trends. It shows that it is fully possible for Chinese defence spending to exceed that of the United States within the next two decades.

Figure 5.5: Plausible US and Chinese defence spending trajectories



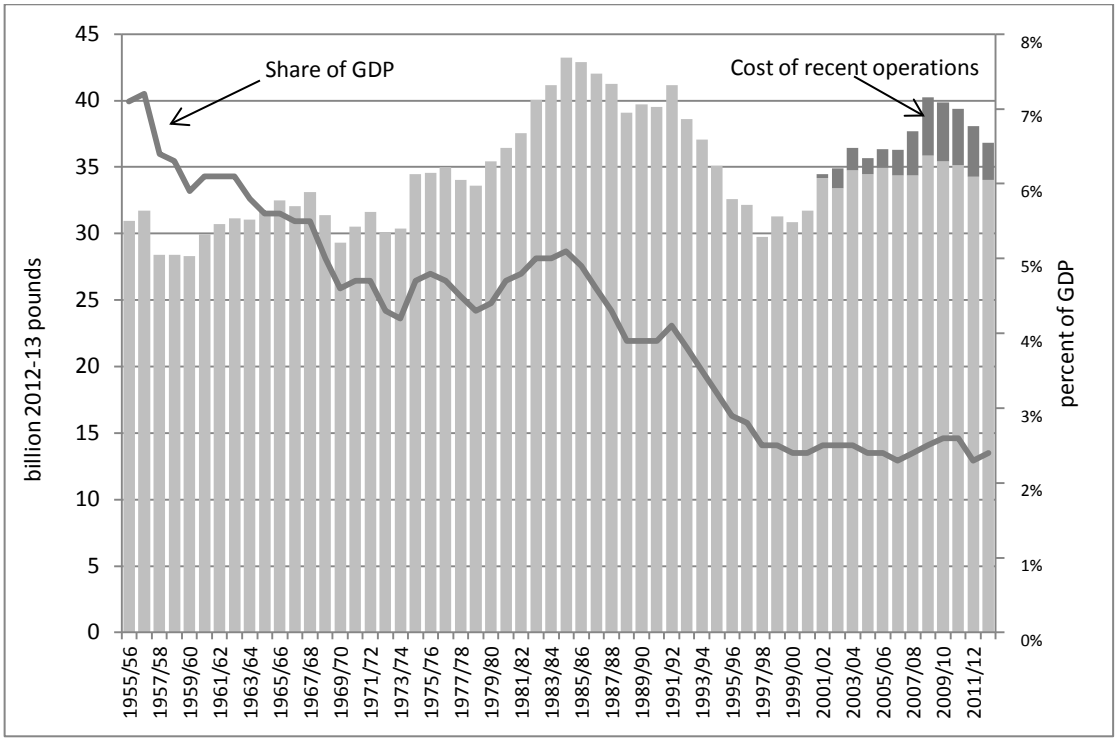
United Kingdom

Like the United States, the United Kingdom ramped up defence spending in the 2000s (though not to the same extent). This trend is now being reversed as part of a rapid fiscal consolidation. The 2011 UK defence budget set out real reductions in underlying defence spending (exclusive of the cost of deployments) of 7.7% over four years from 2010-11 to 2014-15. Subsequent decisions increased the reductions to 8.8% over four years. The initial moves to accommodate the budget cuts include:

- Military personnel reductions of 25,000 (from a base of 158,500) and civilian personnel cuts of 29,000 by 2015, plus the withdrawal of land forces from Germany by 2020. Reduction in tank and heavy artillery numbers by 40% and 35% respectively.
- Immediate decommissioning of an existing Aircraft Carrier, one Landing Platform Helicopter and one Land Ship Dock. Continuing with plans to build two new aircraft carriers but keeping one at 'extended readiness' (mothballing). Putting one existing Landing Platform Dock ship at 'extended readiness'.
- Scrapping of the *Nimrod* maritime patrol aircraft and *Harrier* jump-jet fleets and a reduction in the number of *Chinook* helicopters to be purchased from 22 to 12.
- Five year delay in the replacement of ballistic missile submarine fleet and reduction in the number of warheads from 160 to 120.

On current expectations, UK defence spending is likely to remain flat in real terms at around £33.4 billion from 2015 to 2020. Consequently, further capability reductions will be necessary unless internal budget pressures are held in check in the years ahead.

Figure 5.6: United Kingdom defence spending 1955 to 2012

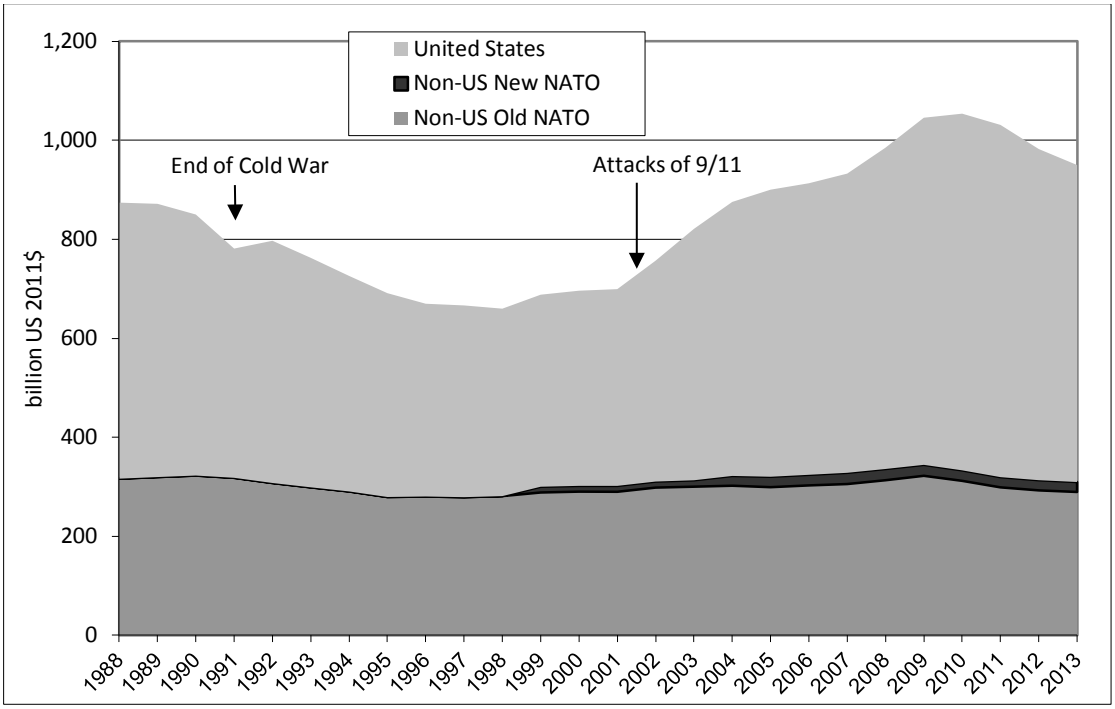


Source: UK House of Commons Library Report SN/SG/113, 2009 & SN/SG/3139, 2012, UK MoD, UK Defence Statistics 2013.

North Atlantic Treaty Organisation (NATO)

Until recently, NATO defence spending (exclusive of the United States) had been remarkably static in real terms since the end of the Cold War, with the subsequent expansion of NATO doing little to change the situation. However, in recent years spending has fallen.

Figure 5.7: NATO defence spending 1988 to 2013



Source: Analysis of data from SIPRI Military Expenditure Database 2014, www.sipri.org

The larger members of NATO and the scale of their present defence spending are given in Table 5.2. In addition to the United States and United Kingdom, many other NATO members are under pressure to reduce defence spending due to fiscal pressures. The resulting cuts are being accommodated in various ways. For example, in 2012 Italy announced plans to reduce its troop strength from 183,000 to 150,000, Germany ended conscription in 2011, and since 2009 France has shed 54,000 military and civilian positions. Because these countries are subject to the same cost pressures as the United States, the scale of NATO forces will continue to decline in the years ahead making it even more difficult to undertake operations such as in Afghanistan.

Table 5.2: Key NATO members' defence spending 2013

	United States	United Kingdom	France	Germany	Italy	Canada	Spain	Netherlands
Defence spending as a share of GDP	3.70%	2.35%	1.91%	1.23%	1.22%	0.89%	0.84%	1.28%
Defence spending in 2013 US$ billions	600	57.0	52.4	44.2	25.2	16.4	11.6	10.4

Source: IISS, The Military Balance 2014.

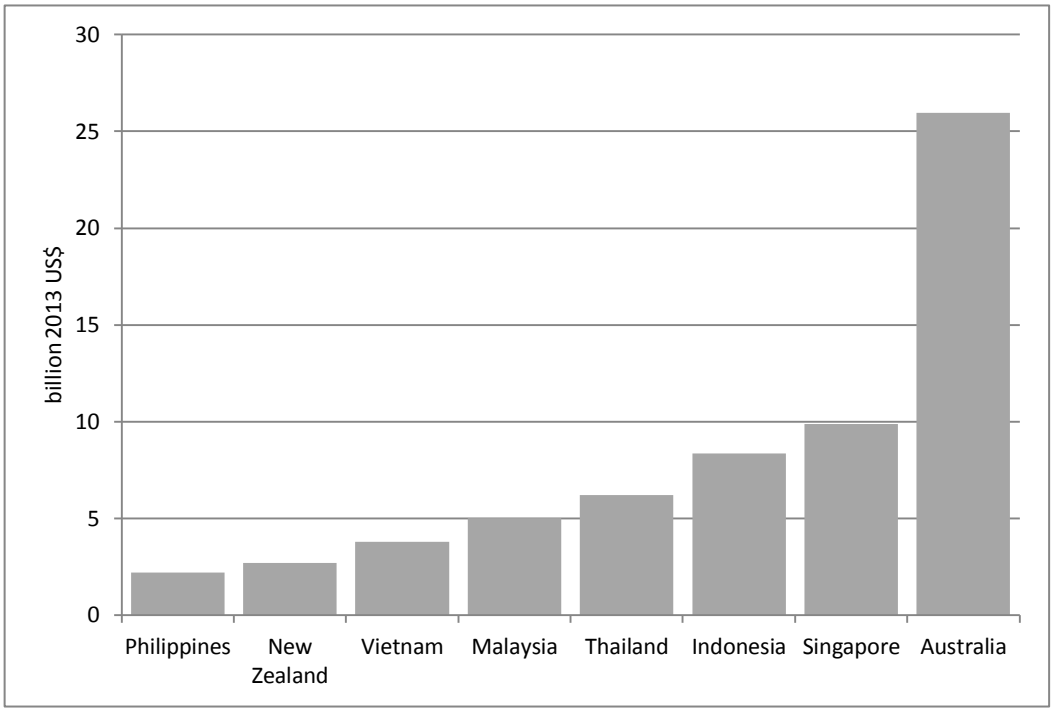
Regional trends

Defence spending trends in Maritime Southeast Asia and Greater Asia are summarised on the following two pages and examined in depth overleaf.

Maritime Southeast Asia

Defence spending for 2012 in the seven largest Southeast Asian states plus Australia is plotted in Figure 5.8 and further detailed in Table 5.3. Two points are worth making. (1) Australia outspends any of its neighbours by a comfortable margin. (2) Only Singapore shows any real sign of strategic angst, with a GDP share of 3.44%. Note that changes to reporting make New Zealand defence spending data difficult to track.

Figure 5.8: Defence spending 2013 in Maritime Southeast Asia



Source: IISS, The Military Balance 2014.

Table 5.3: Defence spending 1990 to 2013; Maritime Southeast Asia

	New Zealand	Vietnam	Philippines	Malaysia	Indonesia	Thailand	Singapore	Australia
2013 defence spending as a share of GDP	1.48%	2.44%	0.78%	1.52%	0.89%	1.46%	3.44%	1.63%
Average annual defence spending growth 2000 to 2013	-	-3.7%	3.6%	4.8%	6.5%	3.8%	2.1%	2.8%
Average annual defence spending growth 1990 to 2000	-3.4%	-	-1.4%	3.5%	2.6%	-1.4%	6.0%	1.6%

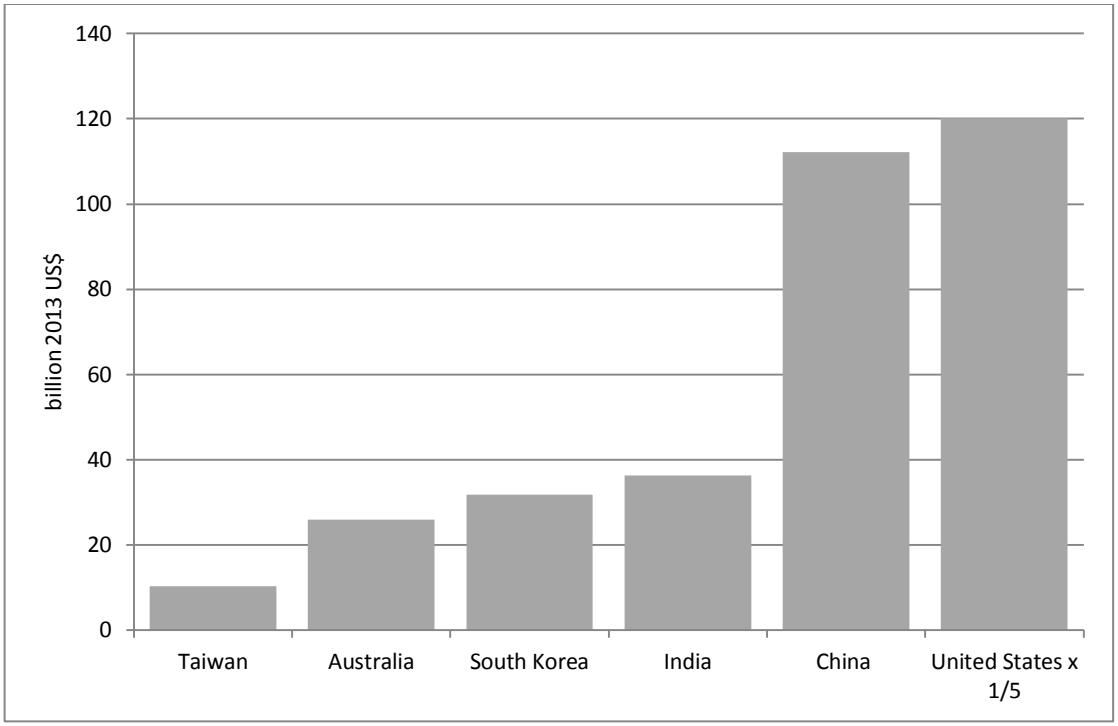
Sources: GDP share taken from IISS, The Military Balance 2014, defence spending growth is measured in own currency.

Greater Asia

Defence spending for 2012 in the six largest Greater Asian states plus Australia is plotted in Figure 5.9 and further detailed in Table 5.4 (Note: US figures have been scaled to fit). Several points are worth making. (1) Australia is a minnow in the tank of North Asian security. (2) Only India and South Korea shows any real sign of strategic concern with GDP shares of around 2.0% and 2.5% respectively. (3) Taiwan and Japan are allowing their defence capabilities to atrophy, notwithstanding that Taiwan's GDP share remains above 2%. (4) Although China devotes less than 1.3 % of GDP to Defence, it has been increasing its defence spending at an impressive rate over the past two decades.

On the basis of defence spending, it is clear that the balance of military power in the region is slowly shifting from the United States and its allies to China.

Figure 5.9: Defence spending 2013 in Greater Asia



Source: IISS The Military Balance 2014

Table 5.4: Defence spending 1990 to 2012; Greater Asia

	Taiwan	Australia	South Korea	India	Japan	China	United States
2013 defence spending as a share of GDP	2.08%	1.63%	2.53%	1.84%	0.99%	1.24%	3.70%
Average annual defence spending growth 2000-2012	-1.8%	2.8%	3.4%	3.4%	-0.1%	12.6%	4.4%
Average annual defence spending growth 1990-2000	1.4%	1.6%	2.6%	4.6%	0.9%	7.6%	-2.7%

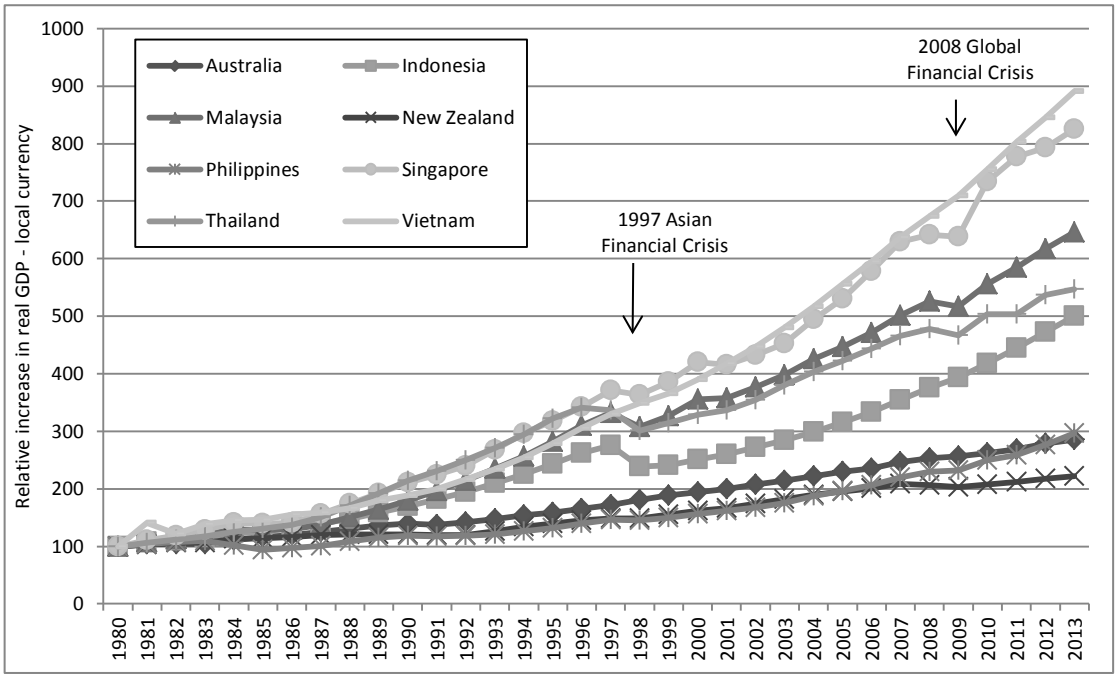
Sources: GDP share taken from IISS, The Military Balance 2014, defence spending growth is measured in own currency.

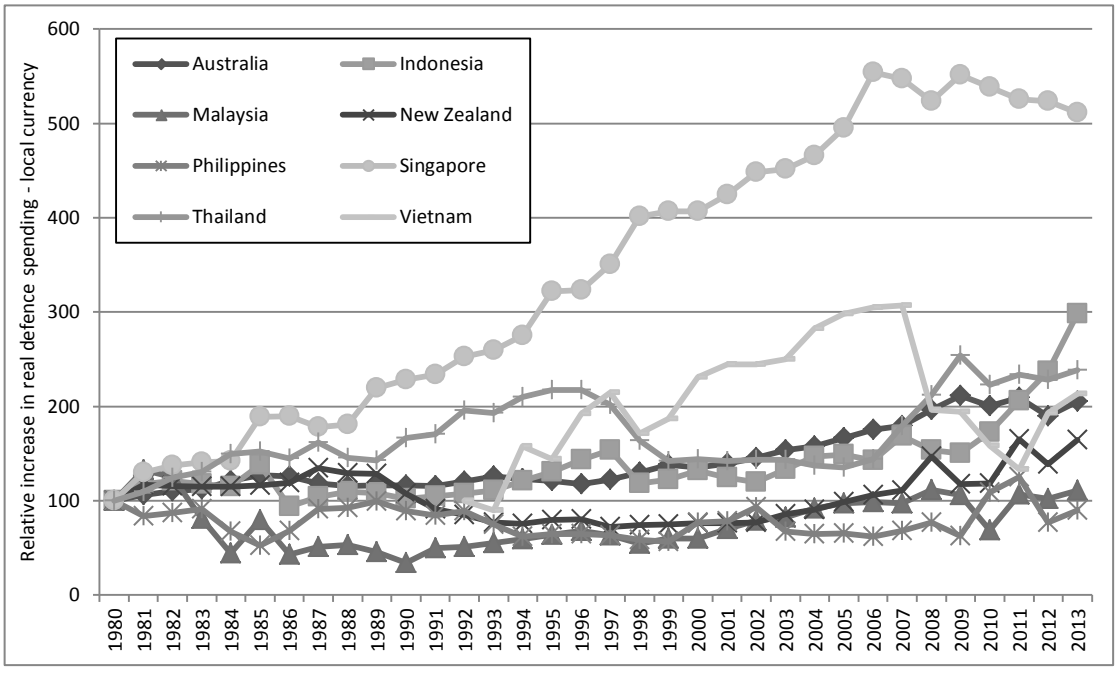
Regional economic and defence spending trends – the details

The least ambiguous way to track *relative changes* in the size of a country's economy is to adjust its GDP in local currency to a single base year using its GDP-deflator. Similarly, the least ambiguous way to track *relative changes* in defence spending is to adjust spending in local currency to a single base year using its CPI index.

With 'real' GDP and defence spending so calculated, the relative growth between countries can be compared by normalising the initial values in the base year. This has been done for a selection of countries in Maritime Southeast Asia and Greater Asia in Figures 5.10 and 5.11. Data sources for these and subsequent graphs are listed at the end of this section.

Figure 5.10: Relative economic and defence spending growth, Maritime Southeast Asia

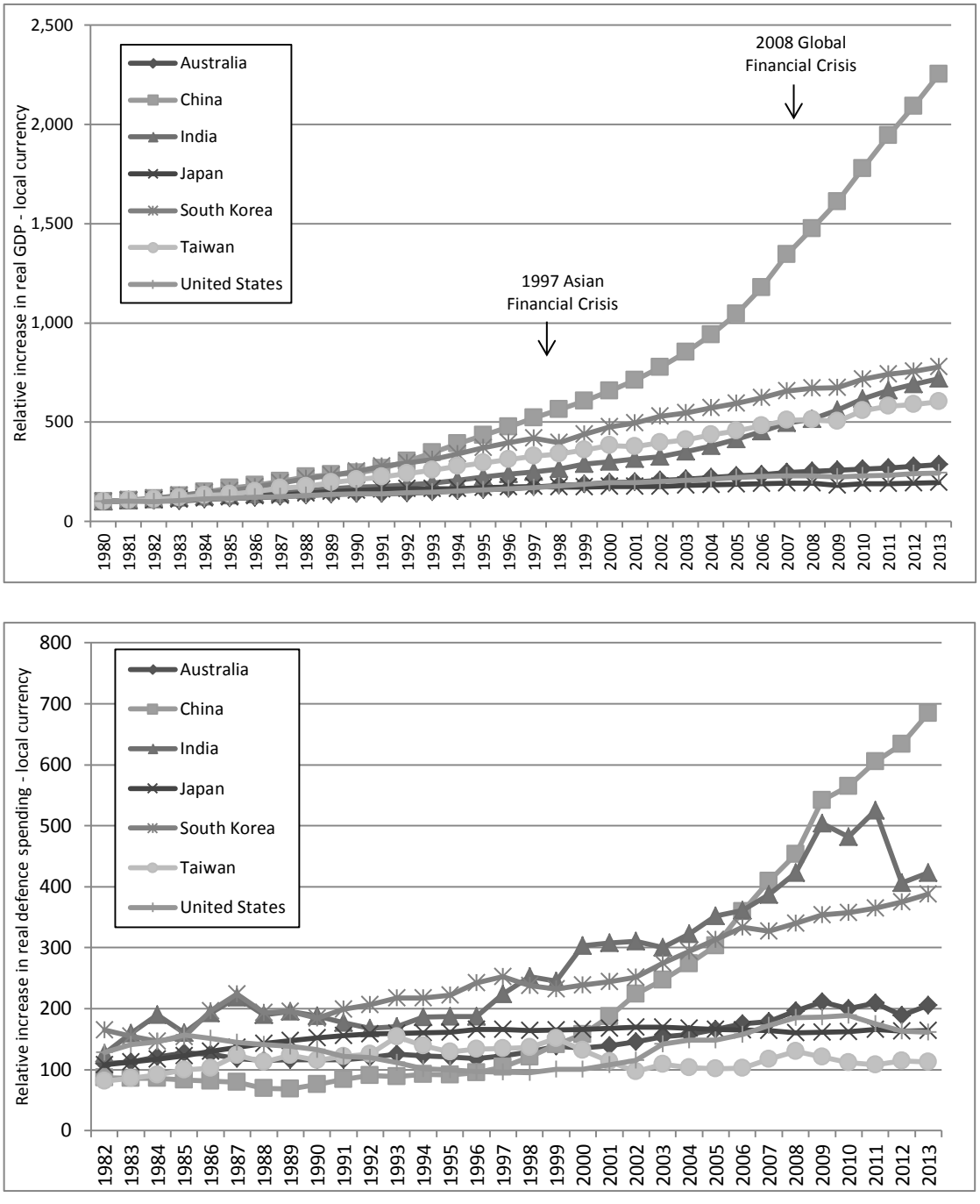




It's clear that developing countries have achieved faster economic growth than their more-developed counterparts. China in particular has achieved spectacular economic growth since the early 1990s—though its military spending did not take off until around a decade later. Among the countries of Maritime Southeast Asia, Singapore has managed steady economic growth which has been reflected in a similar trend in their defence spending. In comparison, our closest neighbour, Indonesia, has achieved healthy economic growth but has not seen the need to increase its defence spending.

The impact of the 1997 Asian Financial Crisis is apparent in Figure 5.10 and to a lesser extent in Figure 5.11.

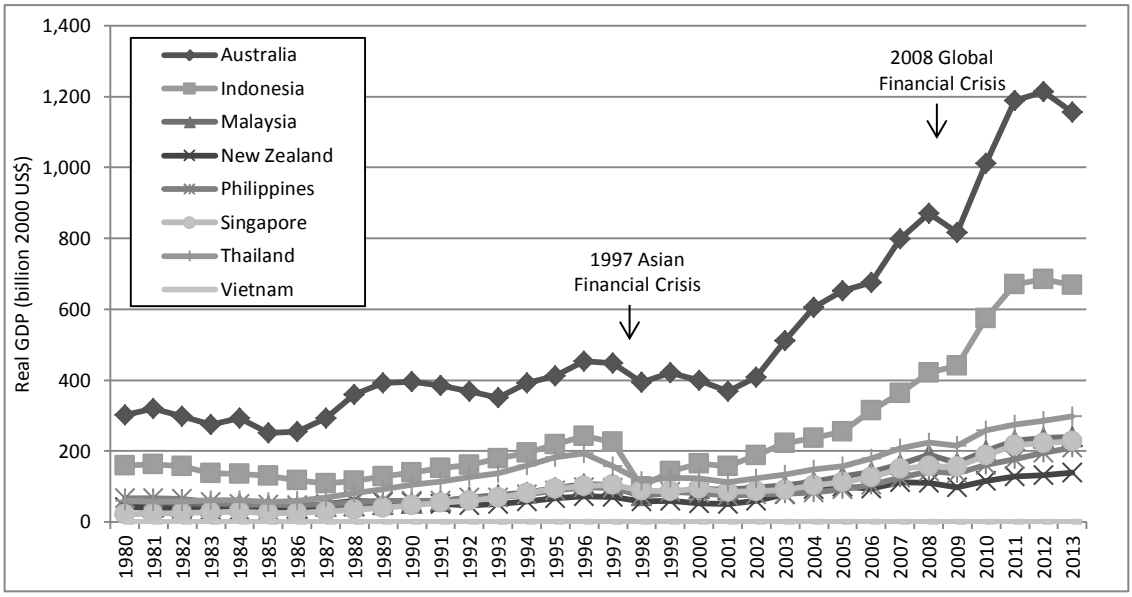
Figure 5.11: Relative economic and defence spending growth in Greater Asia

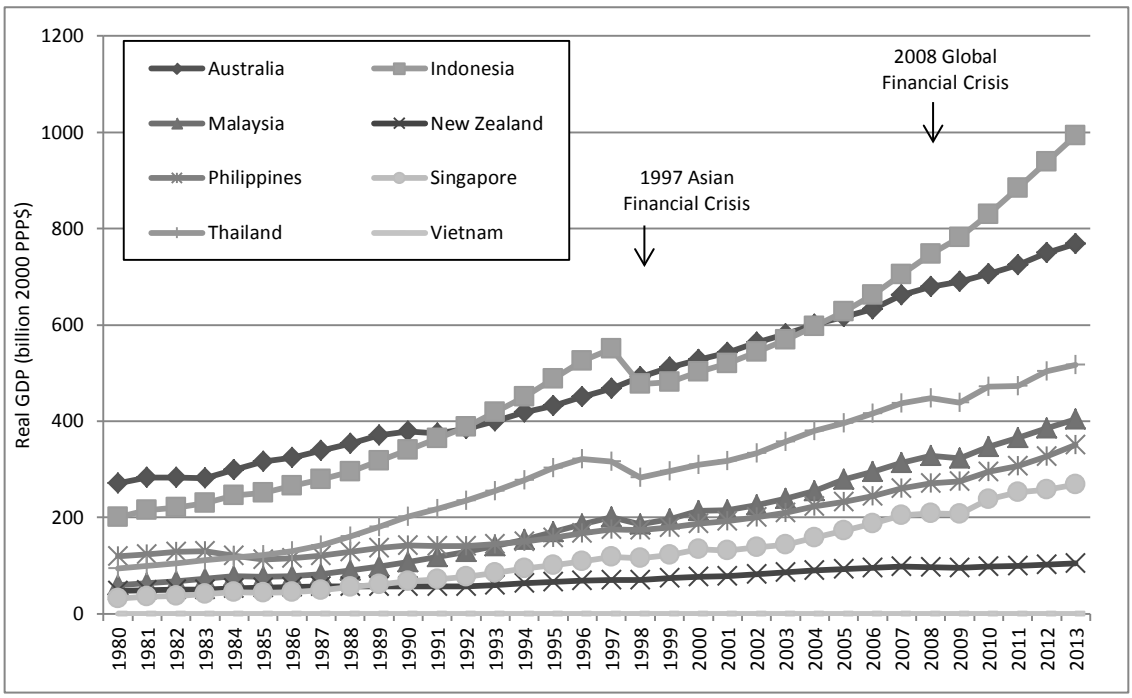


Comparative economic performance

Comparing the relative size of economies (as opposed to the relative rate of growth in size) requires converting the domestic currencies involved to a common currency. In practice, this is performed in one of two ways; either by converting to US dollars at prevailing market exchange rates, or by using the World Bank's Purchasing Power Parity (PPP) exchange rates which attempt to capture the buying power of the currency within the country it is used. Typically, PPP exchange rates yield a significantly larger figure for developing countries than market exchange rates. By construction, PPP exchange rates are normalised relative to the US dollar. Figures 5.12 and 5.13 plot national GDP at market exchange rates and PPP for Maritime Southeast Asia and Greater Asia respectively.

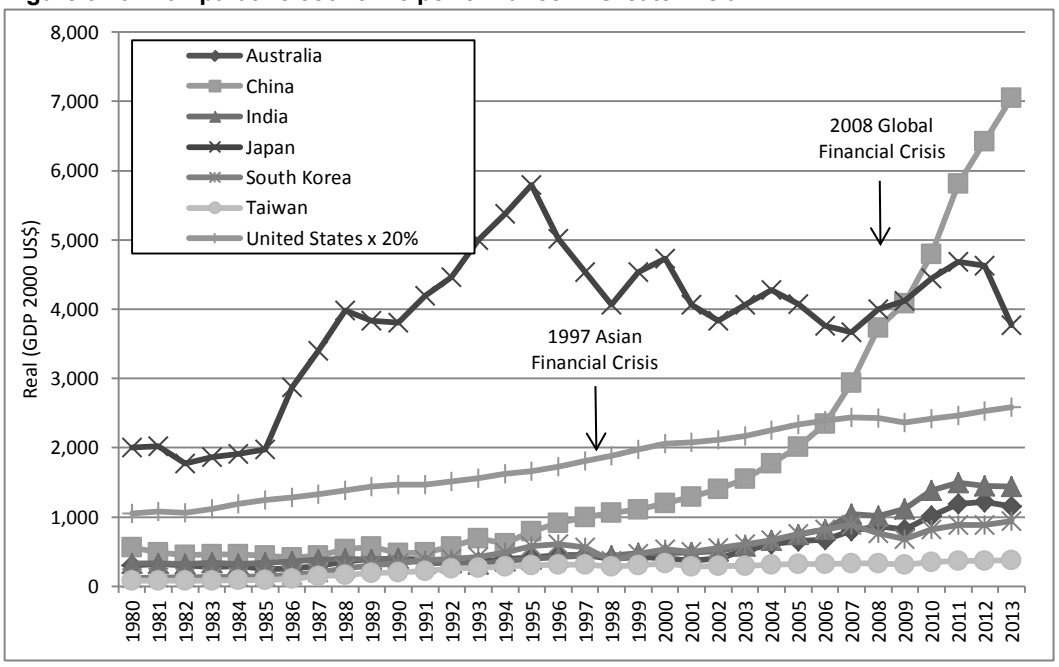
Figure 5.12: Comparative economic performance, Maritime Southeast Asia

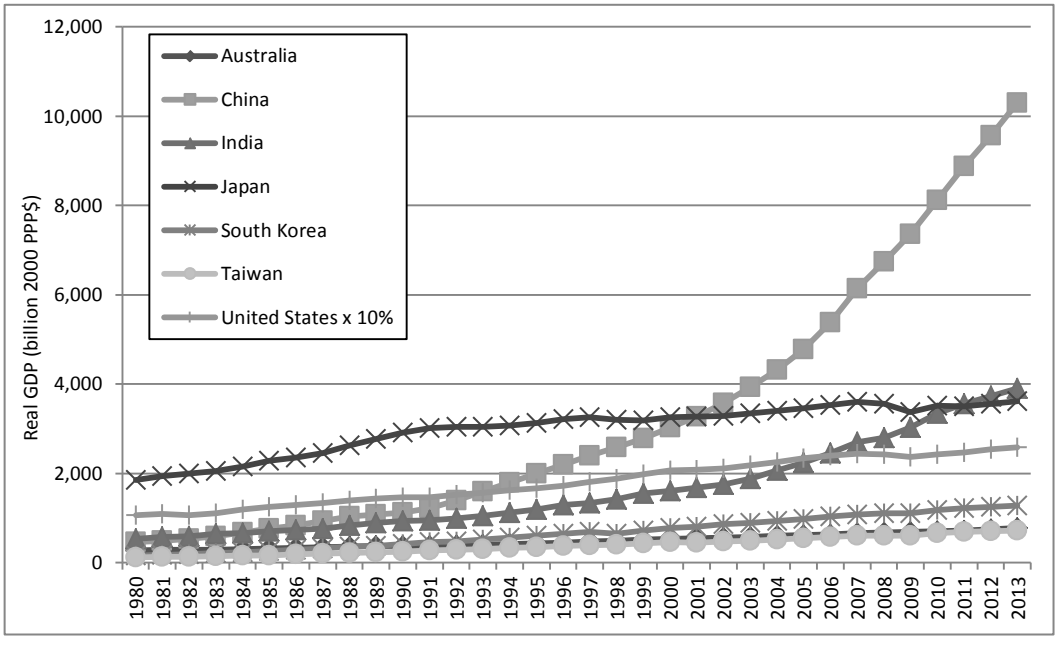




Whether market exchange rates or PPP exchange rates present a more accurate picture of comparative economic performance is debatable. In some sense, they provide complementary views of what is occurring. That said; the substantial volatility of international exchange rates (which are driven more by near-term financial factors than long-term economic fundamentals) introduces large transient vagaries into time-series. For example, the rapid rise of Australian GDP in terms of US$ in Figure 5.11 and the oscillation of Japanese GDP in terms of US$ in Figure 5.13 are both artefacts of exchange rate fluctuations rather than any reflection of actual changes in economic performance. Note that in Figure 5.13 the size of the United States economy has been scaled by a factor of ten to accommodate it on the chart without compressing the data for other countries.

Figure 5.13: Comparative economic performance in Greater Asia





Comparative defence spending—Maritime Southeast Asia

Just as was the case with GDP, comparing the level of defence spending between countries requires conversion to a common basis, usually either US$ or PPP$. In terms of maintaining modern high-tech military capabilities, spending expressed in US$ is probably a better comparative measure. Conversely, the cost of maintaining a large low-tech defence force is probably better compared using PPP exchange rates. Figures 5.15 and 5.16 plot defence spending in Maritime Southeast Asia from 1980 to the present in terms of US$ and PPP$ respectively.

The only countries to consistently and significantly increase their defence spending post-Cold War are Australia, Singapore and Vietnam. All the others have either decreased their spending or are still working to recover ground lost in the 1997 Asian Financial Crisis. An equally sanguine picture emerges from the trends in the share of GDP devoted to defence. The long-term trend for all the countries of Maritime Southeast Asia is one of declining defence burden, see Figure 5.14. Even for those countries with the fastest growth—Singapore and Australia—GDP share has not been growing by an appreciable amount in recent years.

In contradicting those who discern a 'regional arms race', there is little in the defence spending patterns of Maritime Southeast Asia to support such a conclusion. Given that the cost of high-tech military equipment is increasing by around 4% above inflation every year, it is hard to see how anyone other than Australia and Singapore can afford to modernise or significantly expand their air and naval assets on present spending trends.

Figure 5.14: Defence burden, Maritime Southeast Asia

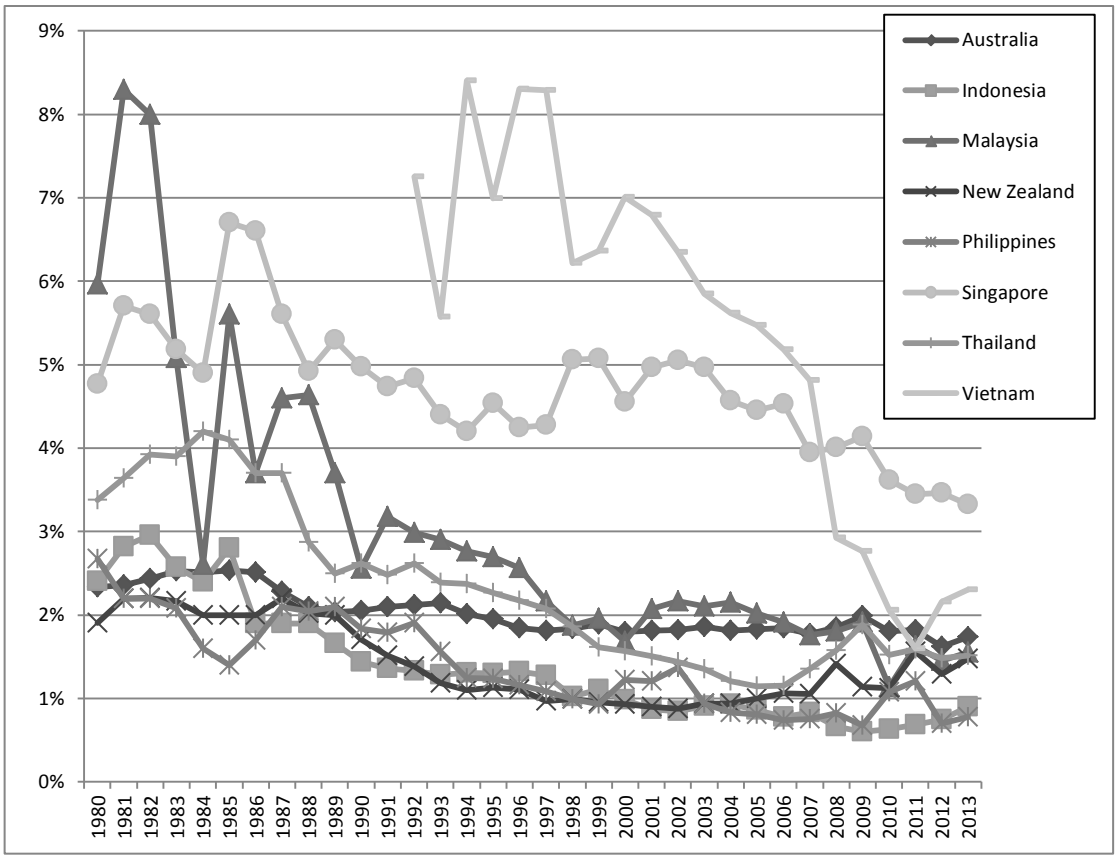


Figure 5.15: Real defence spending (2000 US$), Maritime Southeast Asia

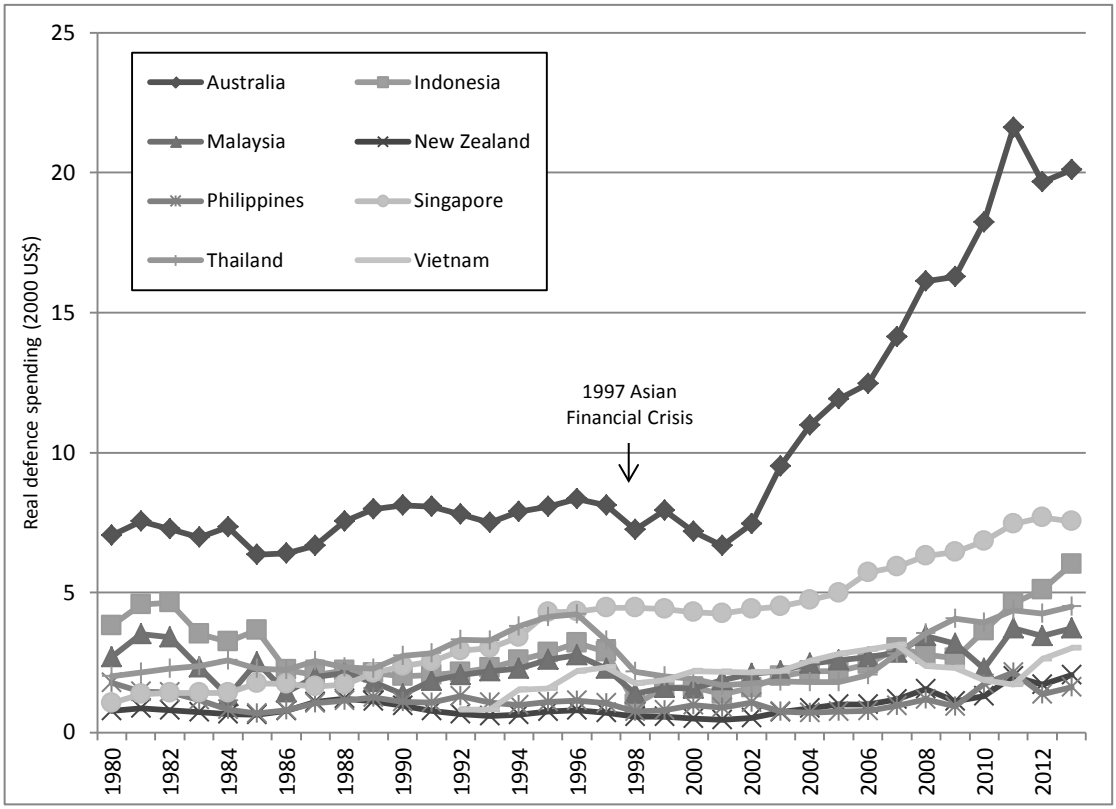
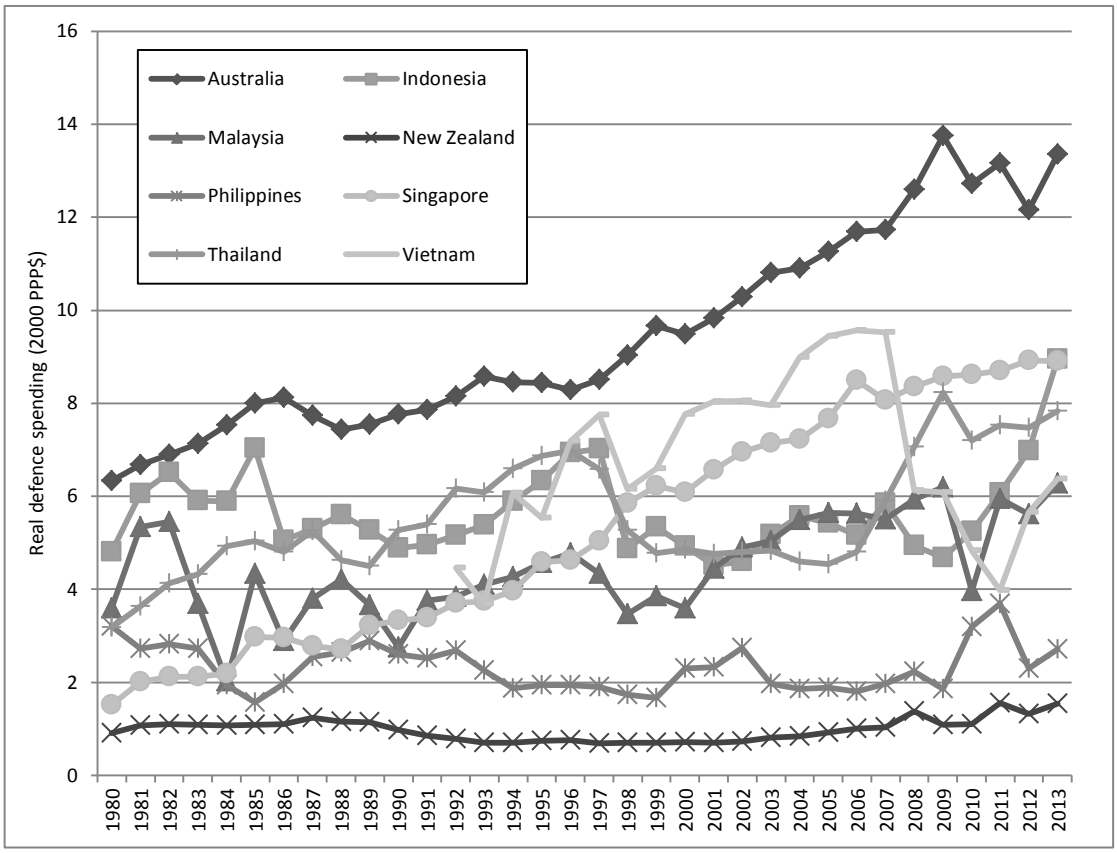


Figure 5.16: Real defence spending (2000 PPP$), Maritime Southeast Asia



Comparative defence spending—Greater Asia

A somewhat more interesting picture emerges of defence spending in Greater Asia and the United States. The strongest and clearest trend has been the steady and substantial decline in the defence burden carried by countries since 1980, see Figure 5.17. The only countries to exhibit a significant rise in defence burden in the nearer term (albeit limited compared with historical levels) are China from the late 1990s and the United States from 2001 onwards.

In terms of absolute spending levels (see Figures 5.18 and 5.19) several points are worth making. China's defence spending has grown appreciably by any measure. The United States remains far ahead of any other country but spending is set to slow. India's defence spending continues to rise as does South Korea's. Taiwan has given up.

Unlike Maritime Southeast Asia, it is clear that the military balance of power is slowly but surely shifting among Greater Asia and the United States—at least to the extent that defence spending translates into military capability. China has comfortably overtaken Taiwan, South Korea and India, and recently Japan. Critically, the Chinese spending figures presented here are taken from official sources and are deemed by many observers to understate the true picture. The US Pentagon report to Congress on Chinese military power has argued that defence spending by the People's Republic is appreciably larger than disclosed.

Figure 5.17: Defence burden, Greater Asia

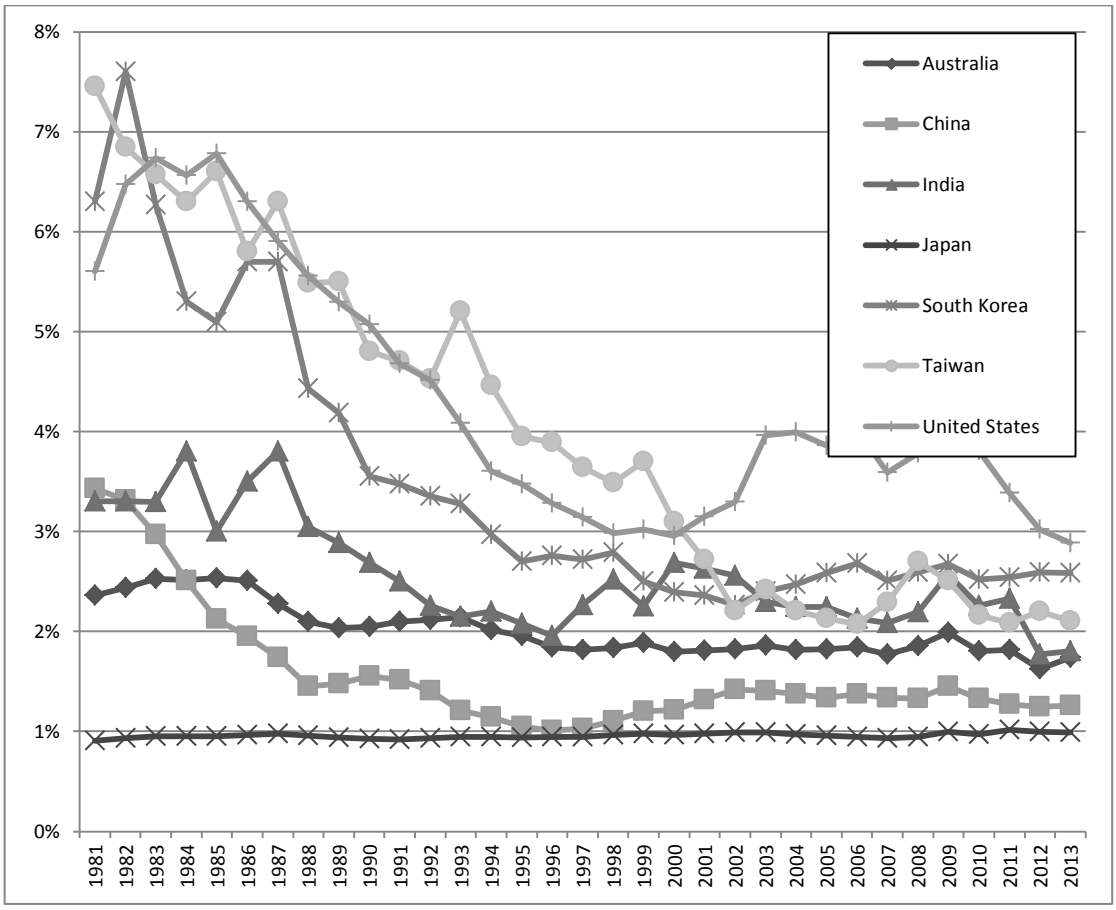


Figure 5.18: Real defence spending (2000 US$), Greater Asia

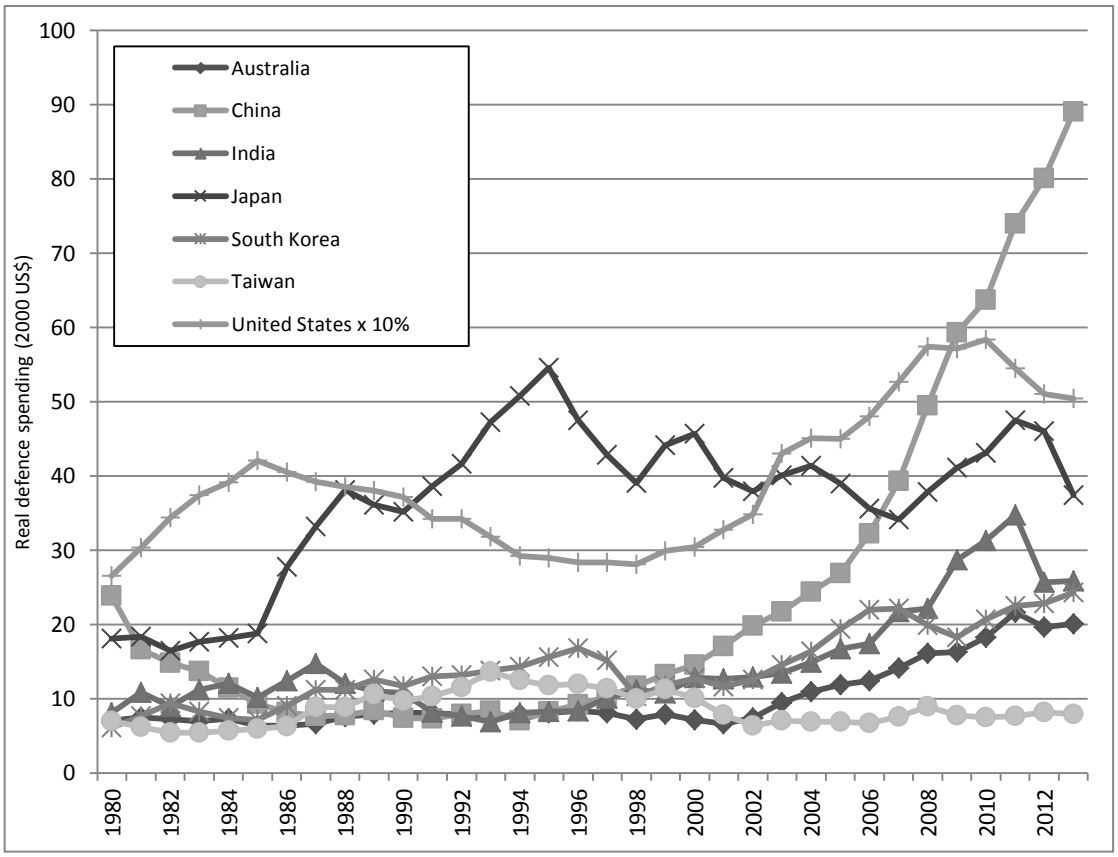
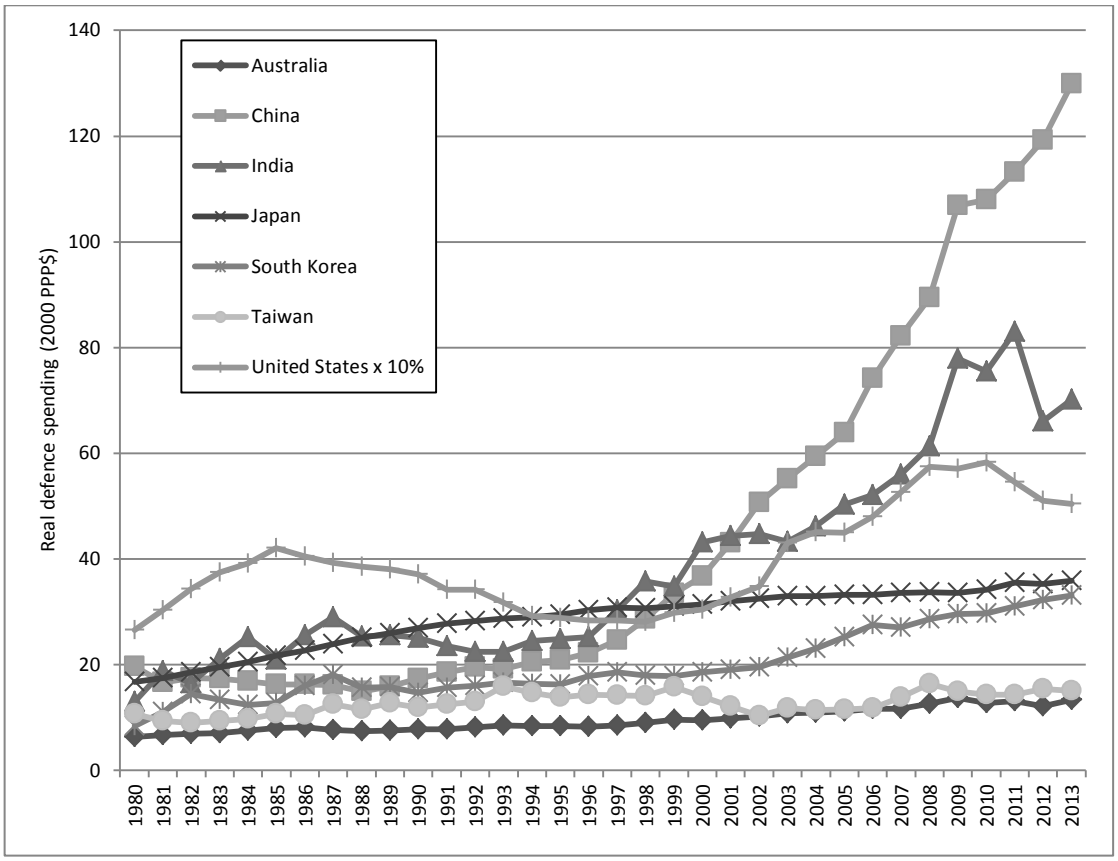


Figure 5.19: Real defence spending (2000 PPP$), Greater Asia

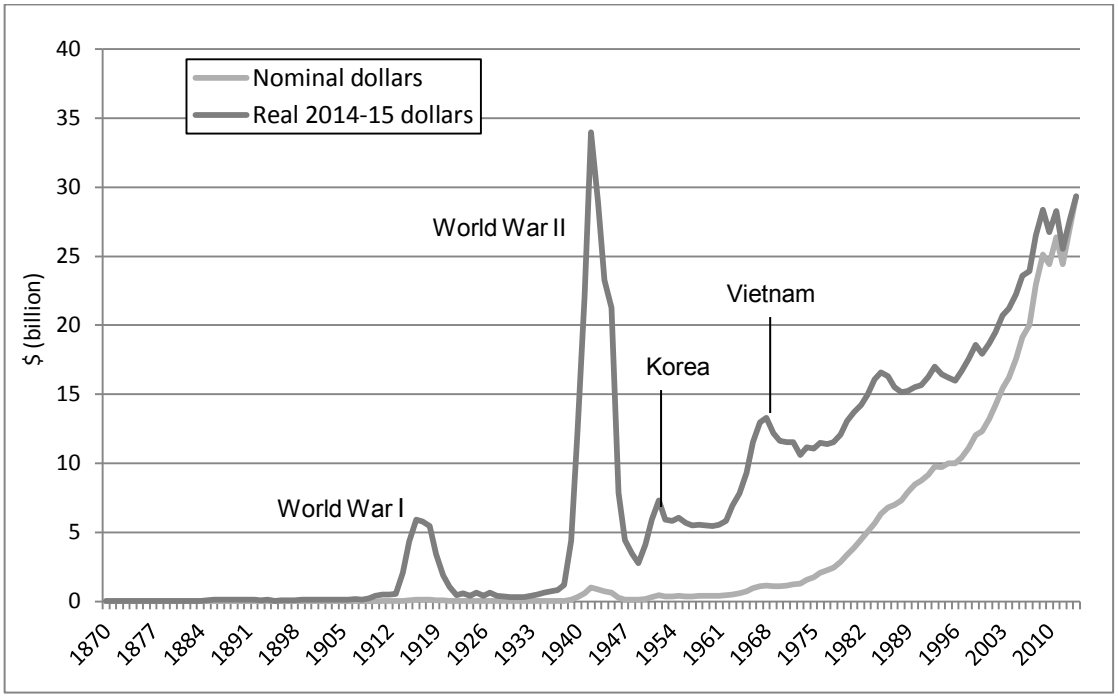


Historical Defence Spending

Historical Australian defence spending

Real and nominal Australian defence spending from 1870 to the present appears in Figure 5.20. Although inflation dominates the nominal data and obscures much of the historical detail, the impact of the wars of the twentieth century is clearly visible in the 'real' data corrected for inflation.

Figure 5.20: Australian defence spending, 1870–2014

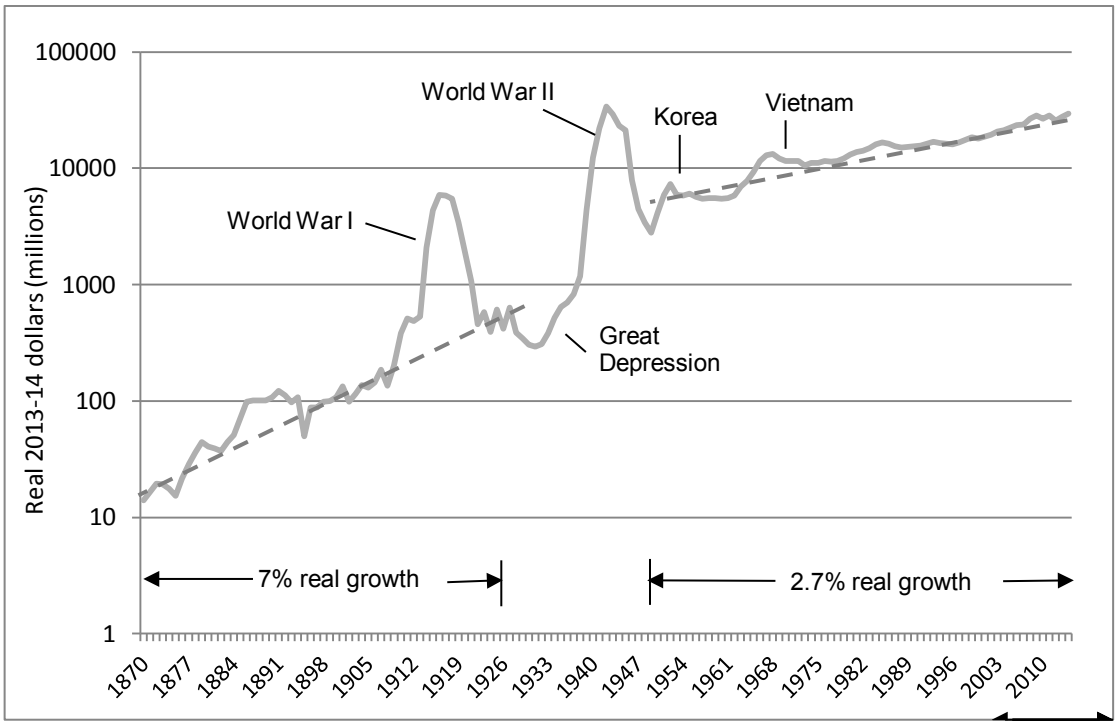


Source: ASPI collation of data from various sources, real dollars calculated using retail/consumer price index.

An even more useful graph of historical spending appears in Figure 5.21 where real spending has been plotted on a logarithmic scale, on which exponential growth (which is close to compounding growth for small rates of increase) appears as a straight line. It shows there have been two epochs of underlying steady growth in defence spending; from 1870 to 1929 spending grew by around 7% per annum, and from 1945 to the present underlying spending grew by around 2.7% per annum.

None of this should be taken to imply that the defence force has expanded significantly during the post-war period—it has not. Rather, the observed growth in defence spending largely reflects the rising intrinsic cost of delivering modern military capability. The 2003 ASPI publication, *A Trillion Dollars and Counting,* estimated that real growth of around 2.65% per annum was necessary just to maintain the present scale and range of capabilities in the ADF. Comparable analysis of US defence spending and force structure trends leads to a similar conclusion. Thus, the recent rise of 3% per annum is more about maintaining than significantly expanding the defence force.

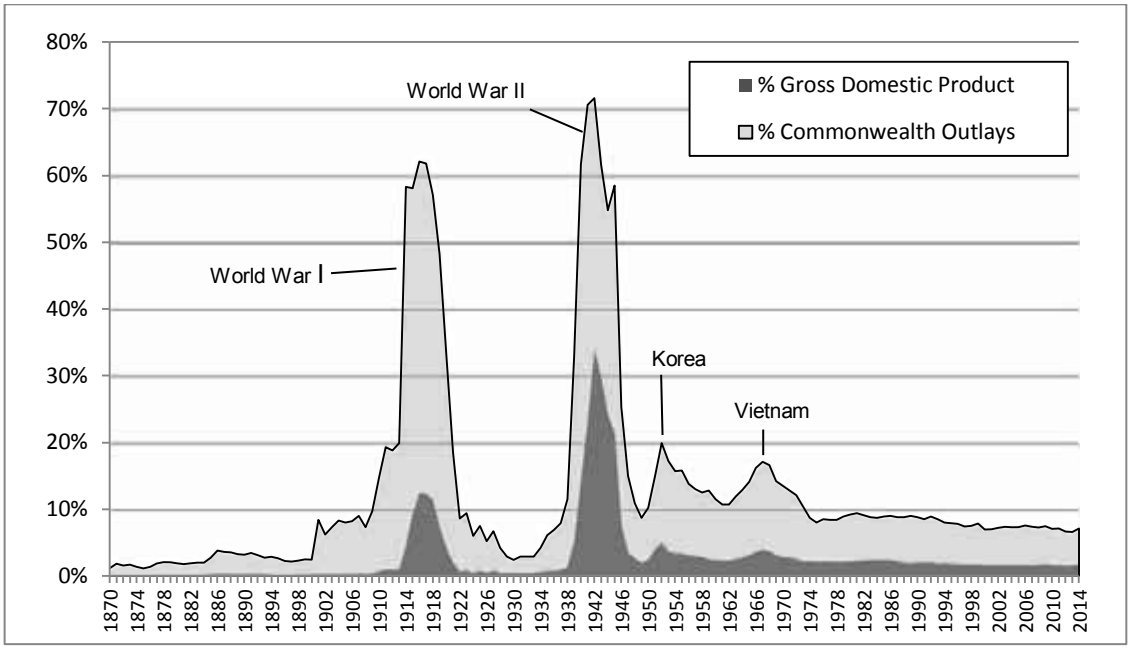
Figure 5.21: Australian defence spending, 1870–2013



Source: ASPI collation of data from various sources, real dollars calculated using retail/consumer price index.

The steady increase in real defence spending since the end of the World War II has been possible because of ongoing growth in the Australian economy over the same period. In fact, as a share of Gross Domestic Product (GDP) the longer-term trend has been for defence spending to account for a progressively smaller share of domestic output. Figure 5.22 plots defence spending as both a share of GDP and as a proportion of total Commonwealth outlays.

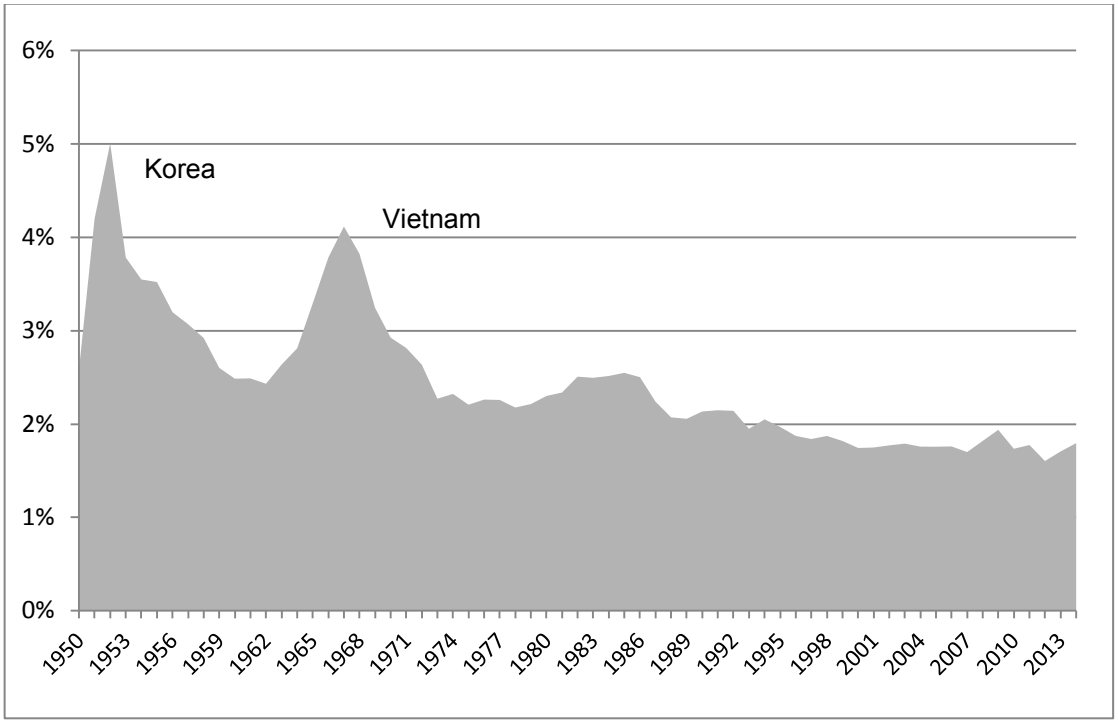
Figure 5.22: Australian defence spending as a share of GDP and Outlays.



Source: ASPI collation of data from various sources.

Given the importance of defence spending as a share of GDP, a magnification of the post-war period has been prepared in Figure 5.23.

Figure 5.23: Defence burden (per cent of Gross Domestic Product) 1946–2014



Source: ASPI collation of data from various sources.

GDP share is not a measure of the adequacy or otherwise of defence spending—that's something that depends on the task at hand. Rather, it measures the proportion of national wealth that a nation devotes to defence.

The planned growth in Australian defence spending will see share of GDP devoted to national defence grow to 2% by 2022-24. While this is high by recent standards, the United States has recently been expending more than 4.7% of GDP and the United Kingdom 2.5%.

Even taking account of the growing fiscal burden due to the ageing of the Australian population, there is no reason to conclude that a defence burden in the range of 2% to 3% is unsustainable. While it is true that health and ageing will steadily demand a growing share of GDP in the decades ahead, the concurrent rise in individual prosperity (as measured by GDP per capita) will allow living standards to grow appreciably even if a larger share of national product is diverted for public goods like health, aged care and defence.

A more detailed examination of the affordability of Australian defence spending can be found in the 2008 ASPI publication *Strategic choices: Defending Australia in the 21st century*.

Australia's defence effort in an international context

According to the World Bank, in 2012 Australia had the twelfth largest economy on earth measured at market exchange rates (and seventeenth using Purchasing Power Parity (PPP) according to the IMF in 2013). From this annual bounty of around 1.6 trillion dollars, Australia finds the money to fund its defence. Table 5.5 displays Australia's 2013 defence

spending (the latest year for which comprehensive data is available) along with that of a selection of countries including allies, regional neighbours and other developed industrial economies around the globe. All figures are given in US dollars calculated at prevailing market exchange rates.

Table 5.5: Defence spending and burden 2013

2013 GDP		2013 Defence expenditure		2013 % GDP	
Country	$US(b)	Country	$US(b)	Country	%
USA	16,227	USA	600.4	Israel	5.98
China	9,032	China	112.0	USA	3.70
Japan	5,152	Russia	68.1	Singapore	3.44
Germany	3,593	United Kingdom	57.0	Russia	3.08
France	2,743	France	52.4	South Korea	2.53
United Kingdom	2,426	Japan	51.0	Pakistan	2.47
Russia	2,211	Germany	44.2	Vietnam	2.44
Italy	2,066	India	36.3	United Kingdom	2.35
India	1,973	South Korea	31.8	Taiwan	2.08
Canada	1,843	Australia	26.0	France	1.91
Australia	1,595	Italy	25.2	India	1.84
Spain	1,381	Canada	16.4	Australia	1.63
South Korea	1,257	Israel	15.1	Malaysia	1.52
Indonesia	955	Spain	11.6	New Zealand	1.48
Turkey	849	Turkey	10.7	Thailand	1.46
Netherlands	813	Netherlands	10.4	Netherlands	1.28
Sweden	574	Taiwan	10.3	Turkey	1.26
Taiwan	495	Singapore	9.9	China	1.24
Thailand	425	Indonesia	8.4	Germany	1.23
Malaysia	329	Sweden	6.6	Italy	1.22
Singapore	288	Thailand	6.2	Sweden	1.15
Philippines	282	Pakistan	5.9	Japan	0.99
Israel	253	Malaysia	5.0	Canada	0.89
Pakistan	239	Vietnam	3.8	Indonesia	0.88
New Zealand	182	New Zealand	2.7	Spain	0.84
Vietnam	156	Philippines	2.2	Philippines	0.78
PNG	21	PNG	0.1	PNG	0.48

Source: IISS: The Military Balance 2014. Note Australian results vary somewhat from local reporting.

With the caveat that fluctuation in exchange rates can make a significant difference in relative ranking, there are three observations worth making. First, our level of defence spending gives us a budget broadly comparable with Spain and Canada, but far below heavy hitters such as Germany, UK, Japan, France and China. Second, we out-spend all our Southeast Asian neighbours by a considerable margin. Third, the United States remains in a class of its own.

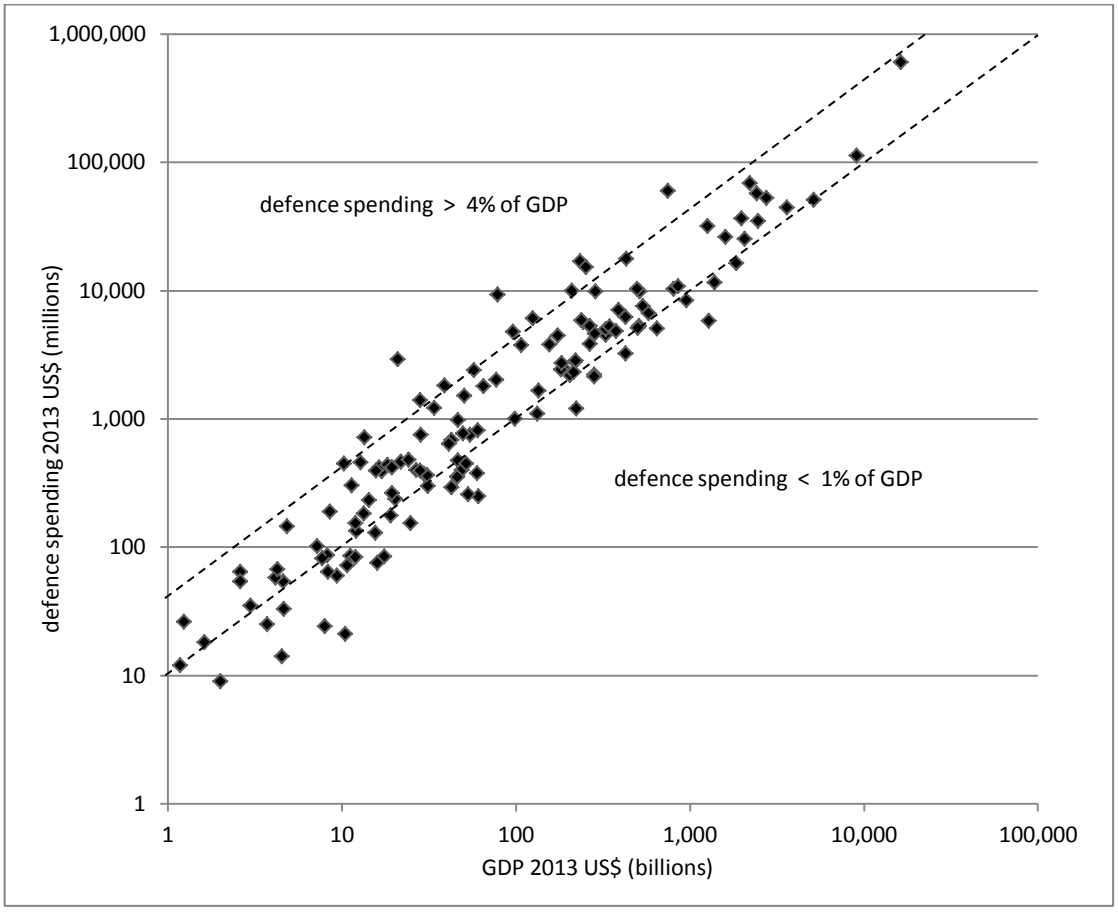
In terms of defence spending as a percentage of GDP, even though our GDP share has dropped to 1.6%, we devote significantly more than the Netherlands (1.3%), Germany (1.2%), Spain (0.8%), Canada (0.9%) and Japan (1.0%). According to the data, the only fully developed Western countries to allocate a larger share of GDP than us are the (the nuclear-

armed) United States (3.7%), France (1.9%) and the United Kingdom (2.4%). Closer to home, we devote a smaller share of GDP than Vietnam (2.4%), India (1.8%), South Korea (2.5%), and Singapore (3.4%), but more than Indonesia (0.9%), Thailand (1.5%) and the Philippines (0.8%). And, perhaps surprisingly, New Zealand (1.5%) appears to be catching up.

To summarise, we spend a greater share than most developed Western nations but a lesser share than many of our significant regional neighbours. This probably reflects two things: (1) the synergy derived from collective defence in Western Europe, and (2) that some of our less prosperous neighbours have to spend a larger share of GDP to meet the demands of a more challenging strategic environment than that of Western Europe.

An alternative and often illuminating depiction of the economic resources a country allocates to defence can be achieved by plotting its position on a graph of GDP against defence spending along with other nations. We've done this in Figure 5.24 for 137 countries based on data collected by the International Institute of Strategic Studies (IISS). To properly capture the wide spread of GDP and defence spending values, the data has been plotted on a dual logarithmic scale.

Figure 5.24: GDP and defence spending for 138 countries 2013



Source: Compiled from data in The Military Balance 2014 (IISS).

A couple of things are immediately apparent. Most obviously, there is a clear correlation between defence spending and economic size; the larger a nation's economy the more it tends to spend on defence. In addition, the vast bulk of nations spend within the band of

between 1 and 4% of GDP on defence. Not surprisingly, those countries that spend larger shares of GDP tend to have more challenging strategic circumstances than those that spend less, or else they are impoverished nations that need to spend a greater share of their meagre resources to achieve a credible capability. Small shares of GDP spending tend to correlate with advantageous geography, strong alliances and benign neighbours. But another factor is also at play. Economically prosperous developed nations tend, understandably, to be able to provide for their defence with a smaller share of GDP.

Money is not the only resource that a nation has available to devote to its defence; there is also people. Table 5.6 lists population numbers, permanent defence force numbers and population percentage in the armed services for our selection of allies, neighbours and Western powers.

Table 5.6: Human resources circa 2014

Country	Population	Country	Armed Forces	Country	% of POP
China	1,355,692,576	China	2,333	North Korea	4.79%
India	1,236,344,631	United States	1,492	Israel	2.26%
United States	318,892,103	India	1,325	South Korea	1.35%
Indonesia	253,609,643	North Korea	1190	Singapore	1.31%
Pakistan	196,174,380	Russia	845	Taiwan	1.24%
Russia	142,470,272	South Korea	655	Turkey	0.63%
Japan	127,103,388	Pakistan	644	Russia	0.59%
Philippines	107,668,231	Turkey	511	Thailand	0.53%
Vietnam	93,421,835	Vietnam	482	Vietnam	0.52%
Turkey	81,619,392	Indonesia	396	United States	0.47%
Germany	80,996,685	Thailand	361	Malaysia	0.36%
Thailand	67,741,401	Taiwan	290	France	0.34%
France	66,259,012	Japan	247	Pakistan	0.33%
United Kingdom	63,742,977	France	222	Italy	0.29%
Italy	61,680,122	Germany	186	Spain	0.28%
South Korea	48,375,645	Israel	177	United Kingdom	0.27%
Spain	47,737,941	Italy	176	Australia	0.25%
Canada	34,834,841	United Kingdom	169	Germany	0.23%
Malaysia	30,073,353	Spain	135	Netherlands	0.22%
North Korea	24,851,627	Philippines	125	New Zealand	0.20%
Taiwan	23,359,928	Malaysia	109	Japan	0.19%
Australia	22,507,617	Singapore	73	Canada	0.19%
Netherlands	16,877,351	Canada	66	China	0.17%
Sweden	9,723,809	Australia	56	Indonesia	0.16%
Israel	7,821,850	Netherlands	37	Sweden	0.15%
PNG	6,552,730	Sweden	15	Philippines	0.12%
Singapore	5,567,301	New Zealand	9	India	0.11%
New Zealand	4,401,916	PNG	2	PNG	0.03%

Source: International Institute for Strategic Studies: The Military Balance, 2014. CIA Factbook.

Here Australia is less well endowed. According to the *CIA Factbook*, Australia ranked 56th in population in 2014; ahead of Sri Lanka and below Cote d'Ivoire. We have about one-third the population of the larger European powers and less than one-tenth that of the US. In regional terms, we're just a little smaller than Malaysia, North Korea and Taiwan, but only a quarter the size of Thailand and the Philippines. Indonesia has more than ten times our population,

and we are but a drop in the ocean compared with India and China. The sobering fact is that we account for less than one-third of one per cent of the world's people.

Our permanent armed forces in 2014 amounted to around 56,000, which puts us near the bottom of the table in our selection of countries. Overall, there are around 56 countries with armed forces numerically superior to ours. As a proportion of population, we have around one-quarter of one per cent of our population engaged as full-time military personnel. This is less than European nations Spain (0.28%), Italy (0.29%) and France (0.34%), and behind the United States (0.47%). In fact, in our selection, the only Western countries we comfortably beat are those well-known strategic optimists, Canada and New Zealand (both of which have their strategic approaches covered by more powerful neighbours) and Sweden which makes extensive use of reserve personnel. That said; we do come ahead of Germany (0.23%) and the Netherlands (0.22%). In regional terms, we fall well behind Singapore (1.31%), Malaysia (0.36%) and Thailand (0.53%). Ranking in terms of proportion of population needs to be seen in the context of our avowed 'maritime strategy'. With the exception of a short period in the 1960s which saw conscription boost the Army to over 40,000, Australia has never maintained a large peacetime standing Army. As a country with no land borders and no prospective adversaries with an amphibious capability, the imperative to develop a manpower-intensive land force is slight.

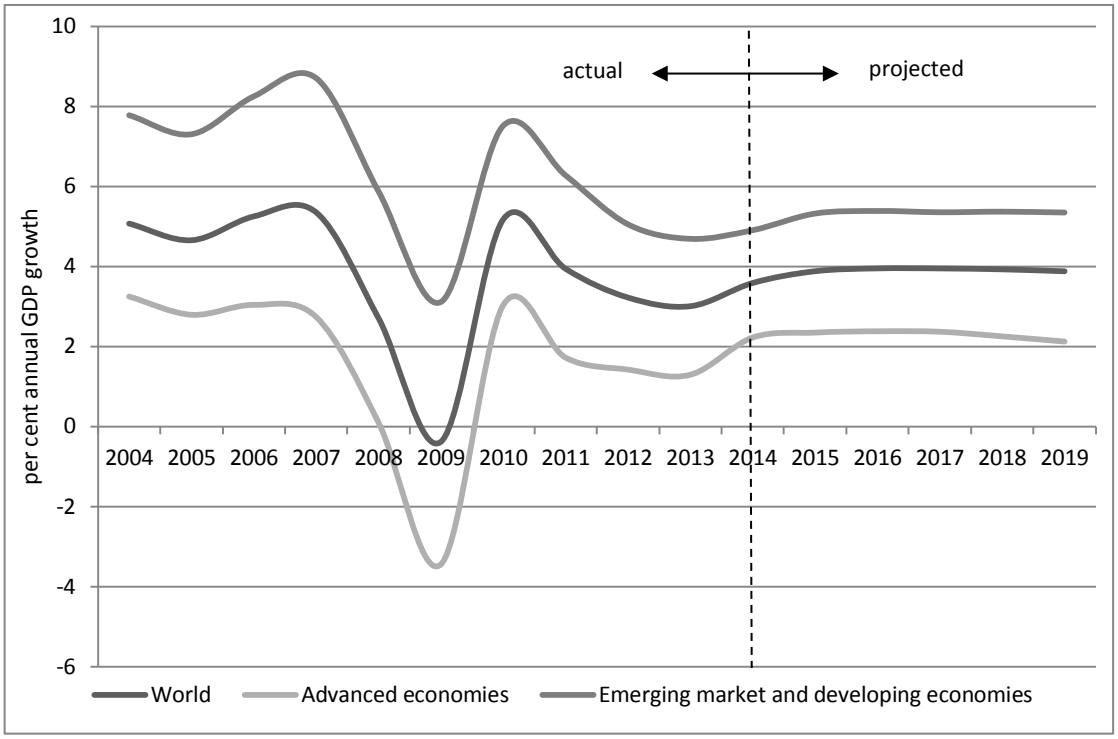
Impact of the Global Financial Crisis

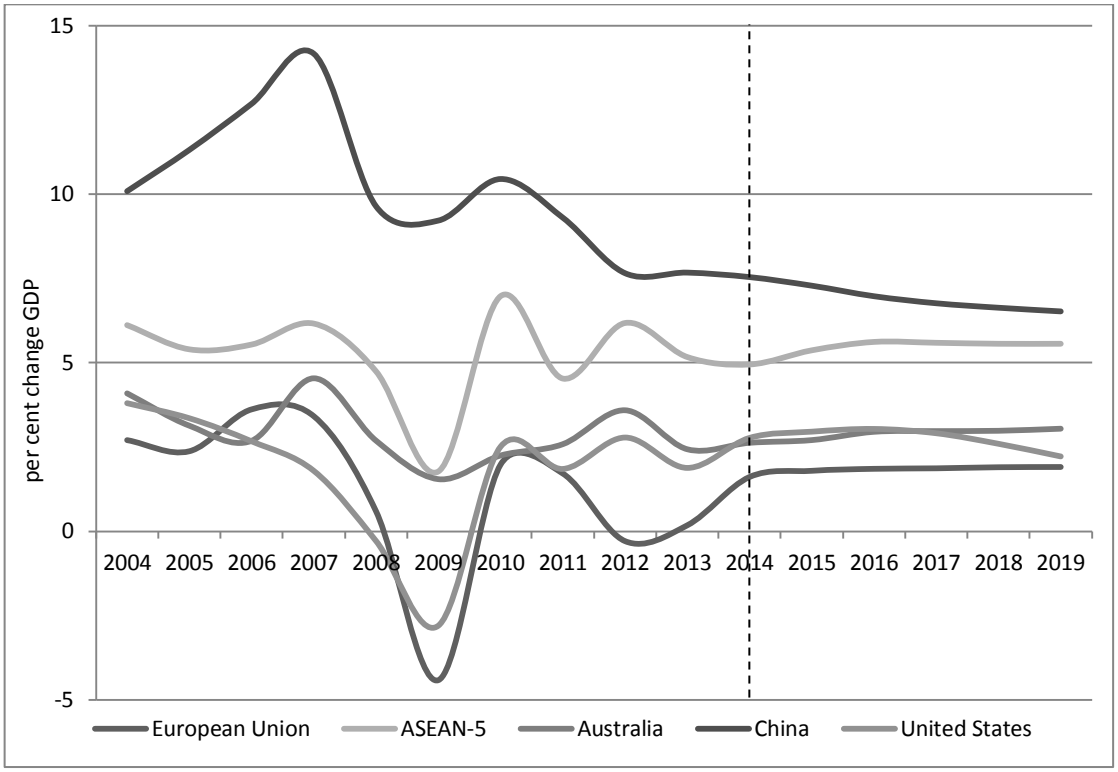
In 2009, the ASPI Budget Brief devoted an entire chapter to the potential impact of the GFC. The key aspects of that analysis are updated below. Figure 5.25 shows the recorded and prospective economic contraction globally and for advanced and developing economies separately. As can be seen, the impact was more severe in the former. In fact, compared with the initial estimates from early 2009, developing countries have gotten off even more lightly than expected—typically 2-3% less contraction—thereby widening the gap between the impact on developed and developing counties.

The results for specific countries and sub-regions are shown in the lower graph. Note that China and Australia managed to avoid the worst of the recession compared with our respective cohorts.

Over the past twelve months, the world economic outlook has oscillated between pessimistic and uncertain. The ongoing sovereign debt crisis in Europe has cast a shadow over the global economy, growth in China has been less rapid than anticipated, and the United Kingdom is undergoing a double-dip recession. Overall, near-term growth projections are slightly less optimistic today than they were this time last year. The United States, in particular, is undergoing the slowest and most hesitant recovery from recession in the post-war era. Even in Australia, where the impact of the GFC was not severe, the recovery has been slow by historical standards.

Figure 5.25: The Great Recession



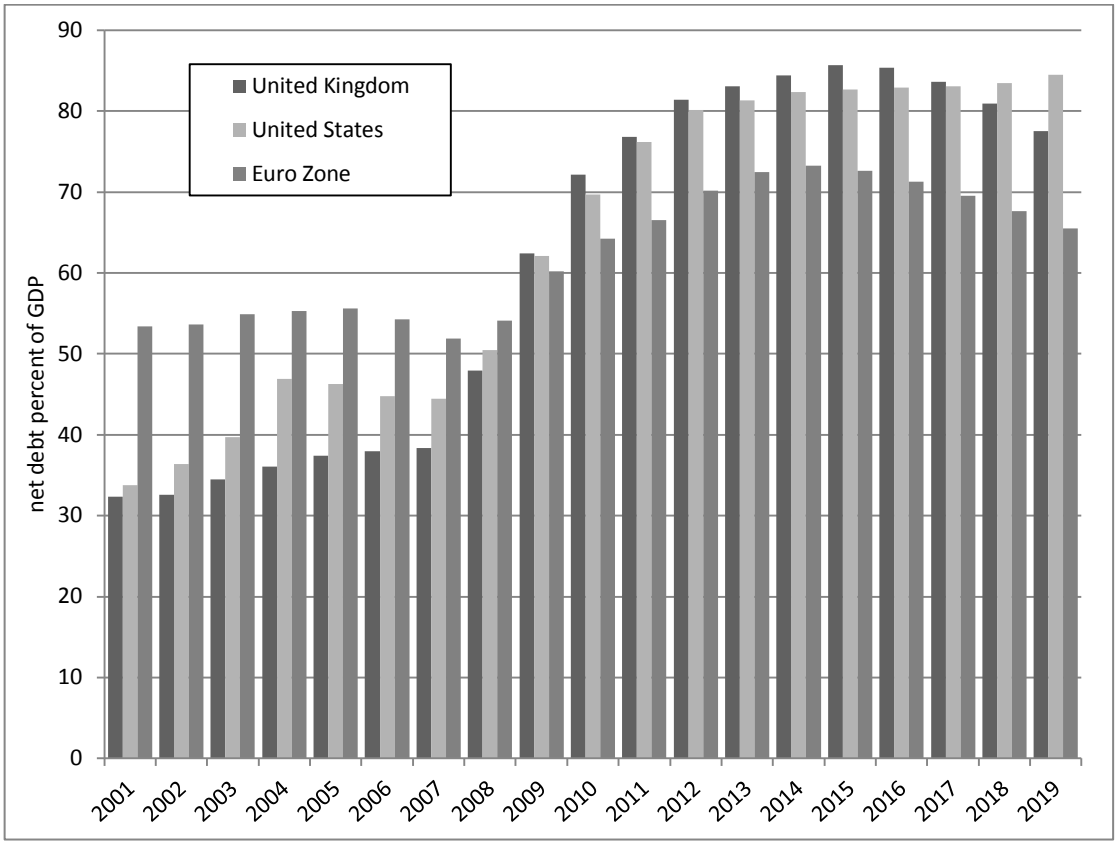


Source: International Monetary Fund, World Economic Outlook, April 2014.

At the time, the GFC only had a limited impact on international defence spending—probably because insufficient time was available to make substantial adjustments. Five years later, and the longer-term consequences are beginning to emerge. As shown earlier, from around 2010 onwards, substantial cuts to defence spending have been made in a number of countries.

From the perspective of defence spending (and government spending more generally), the GFC did two things. First, it rapidly exacerbated long-standing problems with government debt in many advanced economies, see Figure 5.26.

Figure 5.26: The GFC and government debt



Source: IMF World Economic Outlook, April 2014.

Second, the GFC removed the complacency surrounding the sustainability of the financial system in general and government finances in particular. No longer is it possible to pretend that advanced economies can live beyond their means forever. Moreover, the GFC forced many countries to face up to the fiscal dilemma caused by ageing populations. A 2010 study by the IMF projects that, on current policy settings, the average general government net debt among G-7 countries will reach 200% by 2030 and 441% by 2050.

The extent to which a country decides to reduce its defence spending as a result of mounting debt will depend on many factors—economic, strategic and cultural. A proper analysis of how these factors might come together for even one country is beyond the scope of this brief. But as we've already seen, a number of advanced economies are already working towards fiscal consolidation, including through cuts to defence spending.

As a guide to the extent of fiscal pressures, key economic and fiscal data for countries of interest has been collected in Table 5.7. France, Germany, Italy, the United Kingdom and the United States all face sizable growing debts. And while the United States used to be a possible exception when it came to fiscal pressure because it owns the world's reserve currency, the devaluation of the US dollar is eroding that comfort.

As the data makes clear, there will be much more pressure on advanced economies to rein in defence spending than on developing ones. Among the advanced countries, Australia is in a relatively strong position given its low debt and relatively shallow downturn.

It is worth noting that the debt held by advanced economies will be more difficult to pay off than that in developing countries. Not just because advanced economies tend to owe a greater share of GDP, but also because developing economies grow two or three times faster than their advanced counterparts. Japan, in particular, faces an increasingly serious situation where its ageing population will impede growth at the same time as aged care and health costs rise in the years ahead. China, on the other hand, could erase its public debt within several years if it chose to do so.

References and sources

Economic data including GDP, deflators and CPI indices comes taken from the International Monetary Fund's *World Economic Outlook Database 2014* (April 2014) available at www.imf.org. Most of the defence spending data is taken from successive editions of the International Institute of Strategic Studies' *The Military Balance* from 1980 to 2014. Additional data has been drawn from the Department of Defence's *Defence Economic Trends* produced by the Defence Intelligence Organisation between 2000 and 2007. *Defence Economic Trends* is available at http://www.defence.gov.au/dio/product.html. Additional national defence spending data has been taken from: *Analysis of the FY 2012 Defense Budget Request*, 2012, from the Center for Strategic and Budgetary Analysis available at www.csbaonline.org; *China's National Defense in 2010*, the Defense White Paper for the People's Republic of China, available at http://china.org.cn/e-white/index.htm; *Historical Statistics of Japan;* The Statistical Bureau of the Ministry of Internal Affairs and Communications, Japan, http://www.stat.go.jp/english/data/chouki/index.htm. The IMF study referred to is 'Long-term Trends in Public Finances in the G-7 Economies', Carlo Cottarelli and Andrea Schaechter, SPN/10/13, 2010.

Table 5.7: Pressures on government spending that might curtail defence spending

	Fiscal balance 2013 (% GDP)	Percentage annual GDP growth			Net general government debt (IMF) or Public debt (CIA) as a share of annual GDP		
		2007	2009	2013	2005	2012	2018
Advanced economies							
Australia	-1.1%	4.6%	1.4%	3.0%	-3.8%	11.6%	5.6%
Canada	-2.8%	2.1%	-2.8%	1.5%	31%	34.6%	34.9%
France	-3.9%	2.3%	-3.1%	-0.1%	61%	84%	82%
Germany	-0.3%	3.4%	-5.1%	0.6%	53%	57%	51%
Italy	-2.6%	1.7%	-5.5%	-1.5%	89%	103%	101%
Japan	-9.8%	2.2%	-5.5%	1.6%	82%	134%	155%
Korea	2.4%	5.1%	0.3%	2.8%	27%	32%	22%
Netherlands	-3.4%	3.9%	-3.7%	-0.5%	26%	32.5%	44%
New Zealand	-1.9%	3.5%	-1.6%	2.7%	11.3%	26.4%	26.9%
Singapore	5.0%	9.0%	-0.8%	2.0%	102%	111%	-
Spain	-6.6%	3.5%	-3.7%	-1.6%	35%	72%	98%
Taiwan	-3.0%	6.0%	-1.8%	3.0%	32%	36%	-
United Kingdom	-7.0%	3.6%	-4.0%	0.7%	37%	83%	91%
United States	-6.5%	1.9%	-3.1%	1.9%	49%	88%	87%
Regional economies							
Indonesia	-2.8%	6.3%	4.6%	6.3%	56%	24.8%	-
Malaysia	-4.0%	6.5%	-1.5%	5.1%	45%	53.5%	-
Philippines	-0.8%	6.6%	1.1%	6.0%	74%	51%	-
Thailand	-2.7%	5.0%	-2.30%	5.9%	48%	43.3%	-
Vietnam	-4.0%	8.5%	5.3%	5.2%	66%	48.2%	-
Emerging powers							
China	-2.1%	14.2%	9.2%	8.0%	31%	31.7%	-
India	-8.3%	10.1%	5.0%	5.7%	60%	51.9%	-
Russia	-0.3%	8.5%	-7.8%	3.4%	28%	12.2%	-

Source: International Monetary Fund World Economic Outlook, April 2013, CIA Factbook 2013.

Chapter 6 – The Cost of War

Key Points

Since 1998, Australia has committed more than $16.5 billion on military operations/overseas deployments.

ADF deployments to Timor-Leste and Solomon Islands have now concluded.

The total commitment to operations in Afghanistan has been $9.3 billion.

Defence has absorbed $1.6 billion of the cost of operations.

Introduction

This chapter includes an explanation of how Defence is funded for deployments, updated information on historical deployment costs and a summary of the cost of recent operations including Iraq and Afghanistan. In addition, the accumulating number of disability pensioners arising from recent deployments is surveyed.

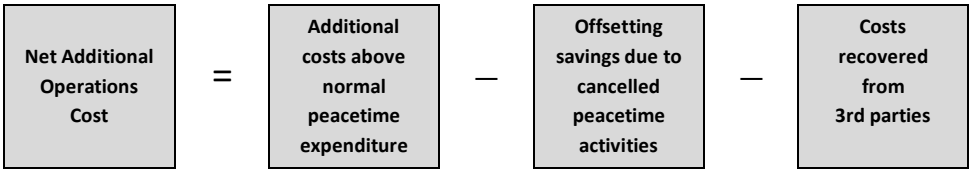
What do we mean by the cost of a war?

As a rule, Defence is supplemented for the *net additional* cost of any major military operation. This makes good sense because, in principle at least, it ensures that Defence does not have to compromise peacetime training to fund operations, and avoids them having to maintain a contingency reserve to cover unanticipated costs. This practice was suspended in 2008-09 because of a surplus of funding. It was then reinstated in 2009-10 but was only applied partially in the case of force protection measures in Afghanistan for which Defence absorbed much of the cost.

Figure 6.1 shows how the net additional cost of an operation is calculated. In the past, Defence only disclosed the aggregate net additional operations cost, the total value of new capital investment and the amount recovered from third parties. However, although offsets remain undisclosed, Defence sometimes provides itemised lists of the individual costs incurred in operations.

Figure 6.1 Calculating the 'Net Additional Cost of War'

Where:



The net additional operations cost includes the additional cost of personnel allowances, shipping and travel, repair and maintenance, health and inoculations, ammunition, contracted support, fuel, inventory, consumables etc. Offsetting savings includes the money saved from foregone activities like the cancelled Exercise Crocodile 99 and the Avalon Air Show in 1999-00 due to the deployment of Australian Forces to East Timor. Those costs

recovered from 3rd parties include the partial recouping of costs from the UN when participating in a UN peacekeeping operation.

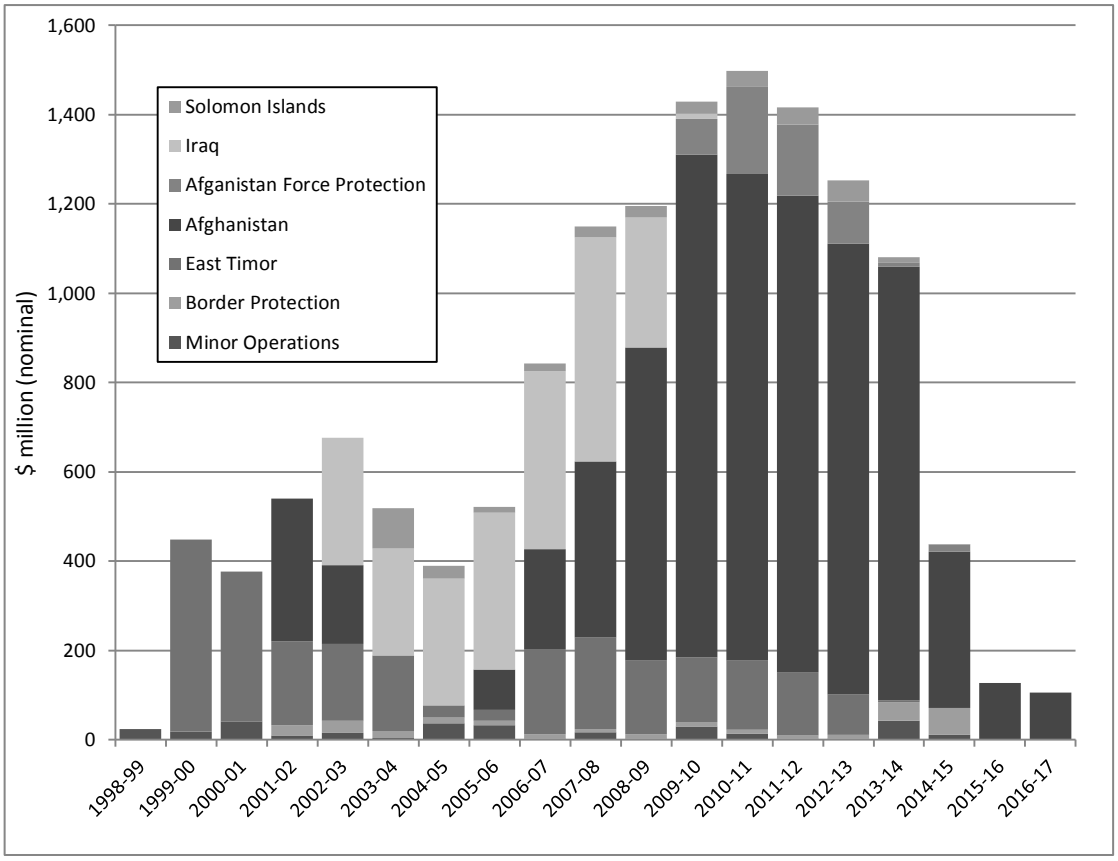
The net additional capital investment usually represents the accelerated filling of capability gaps specific to the operation. Recent examples include the purchase of additional electronic warfare self-protection (EWSP) equipment for the AP-3C maritime patrol aircraft for Iraq, and the rapid acquisition of the *Javelin* anti-armour missile for Afghanistan. Capital costs sometimes also include modifications to platforms and additional inventory purchases.

It's also worth being specific about what is not included. The net additional cost of an operation does not include pay and allowances that would normally be incurred, or the cost of operating platforms within the planned peacetime rate of effort. Nor does it cover the costs incurred outside of Defence by the Australian Federal Police, DFAT or others involved in operations. Thus, aside from additional items like new equipment, ammunition, transport and contracted services, the net additional cost is the *marginal cost* of increased ADF activity due to an operation.

What's the big picture?

Figure 6.2 shows the net cost of Defence deployments from 1998-99 to 2016-17. Note that Defence had been directed to absorb costs of $22 million in 2007-08, $1,082 million in 2008-09, $43.1 million in 2009-10, $271 million in 2010-11, $368 million in 2011-12, $176 million in 2012-13, $32.3 million in 2013-14 and $24.3 million in 2014-15.

Figure 6.2: The net additional cost of ADF operations



Source: Defence Annual Reports and Budget Papers

Minor operations include: Bougainville, which cost $109 million between 1998 and 2003 (of which $43.3 million was absorbed by Defence); the 2006 Commonwealth Games ($13 million); and support to the G20 Summit in 2014 ($15.1 billion).

Figure 6.2 excludes the 'force generation' costs nominally associated with expanding the ADF by 3,555 troops for East Timor in late 1999. This was roughly $450 million per annum permanently included into the Defence funding base at the time of the 2000 White Paper. In the figure, 'Afghanistan' includes the Multinational Interception Force (MNIF) which became, for a time, part of the Iraq operation in March 2003.

As shown in Figure 6.2, the cost of operations fell for the first time in eight years in 2011-12. The total cumulative real cost of recent operations is given in Table 6.1.

Table 6.1: Total real cost of recent and ongoing operations

	Dates (funding)	Length	Cost 2014-15 $ (million)
Minor Operations	1998-99 to 2014-15	17	386
Border Protection	2001-02 to 2015-16	15	294
East Timor	1998-99 to 2013-14	16	3,230
Afghanistan	2001-02 to 2016-17	16	9,261
Iraq	2002-03 to 2009-10	8	2,995
Solomon Islands	2003-04 to 2013-14	11	429
Total	**1998-99 to 2016-17**	**19**	**16,595**

Source: DAR and 2014-15 PBS. CPI deflator used throughout. Afghanistan includes MEAO and Gulf maritime operations. East Timor, 'Force Generation' funding to temporarily expand the Army and Air Force (which did not occur) is not included.

New money for operations in the 2014-15 Budget

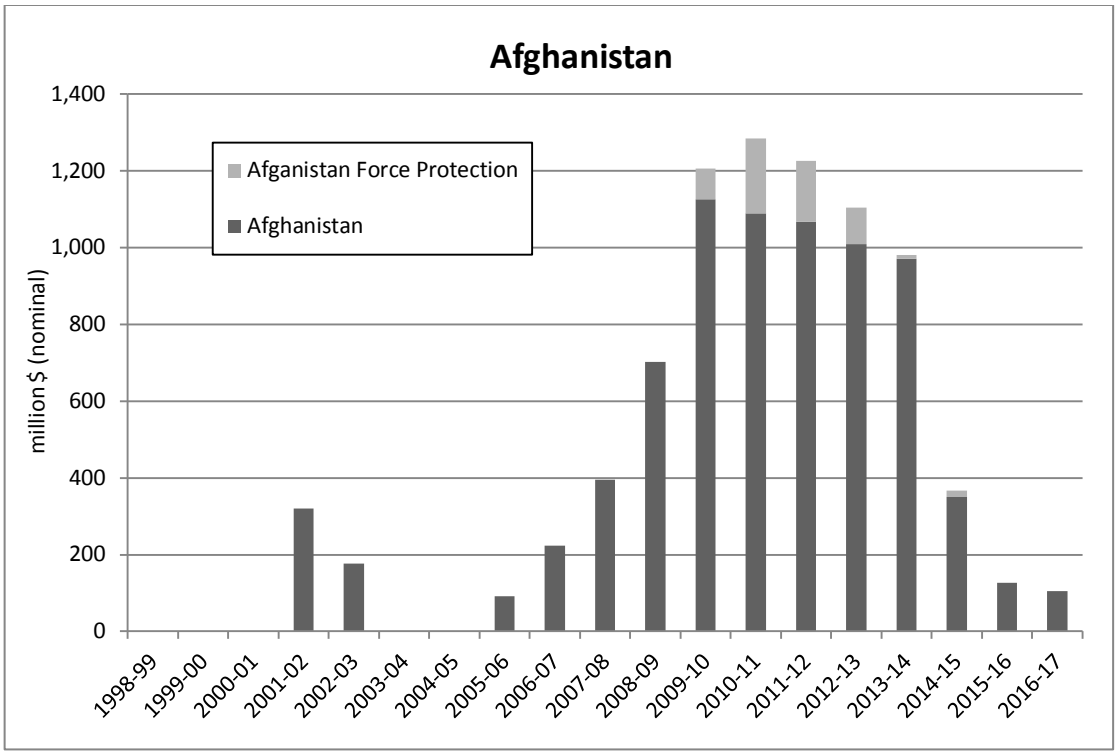
Afghanistan and the Middle East Area of Operations (Op. Slipper, Accordion and Manitou)
The government has funded the ADF deployment to Afghanistan until June 2015 at a cost of $240.8 million for 2014-15, including $16.2 million for enhanced force protection measures. In addition, a further $52 million will be spent on maritime security operations in the Middle East Area of Operations (MEAO) and $57 million supporting operations in Afghanistan and the MEAO from within the Gulf States.

Border Protection (Operation Resolute)
Between 1999 and 2012-13, $150 million was spent of maritime surveillance/border protection operations to Australia's north west, representing an annual cost of around $11 million. However, expended border protection operations resulted in costs of $59.7 million in 2013-14 and an anticipated $59.7 million in 2014-15.

Malaysia Airlines flight MH370 – search (Operation Southern Indian Ocean)
Defence will receive funding of $27.9 million over two years from 2013-14 for the costs of its activities to 30 June 2014 in searching for MH370.

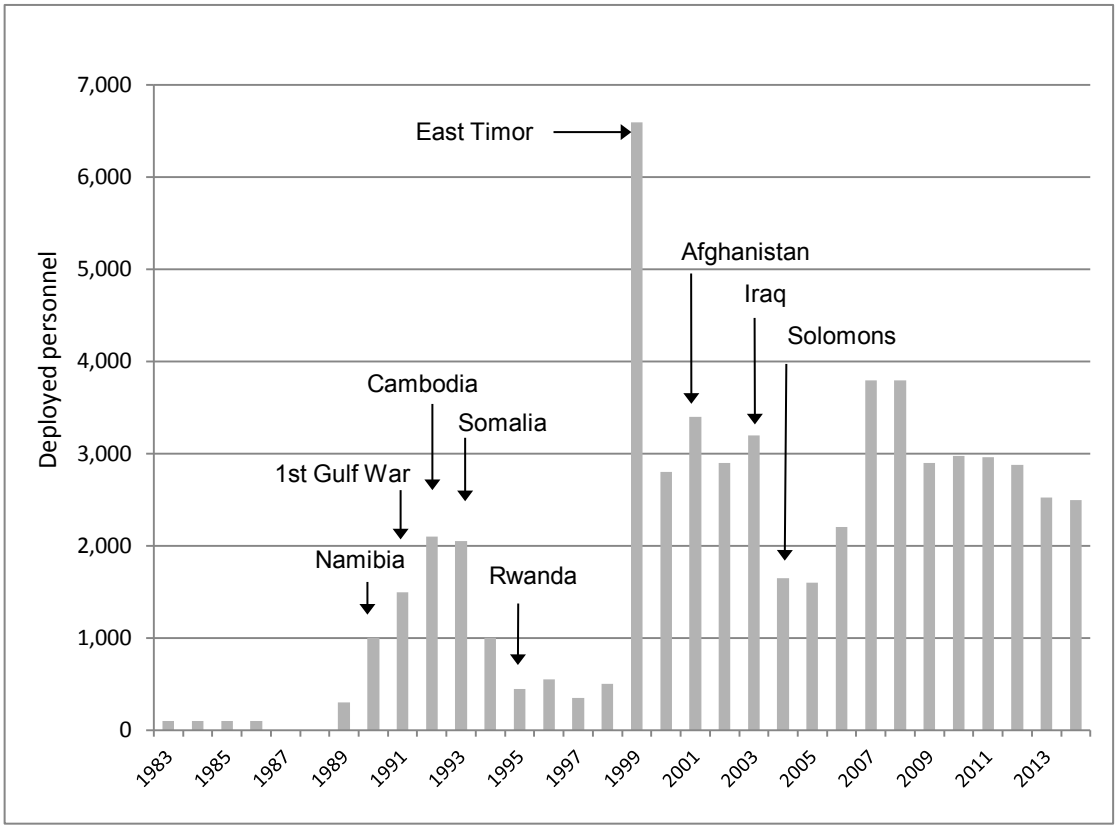
Support to 2014 G20 Summit
A total of $7.1 million will be spent in 2013-14 and $8.0 million in 2014-15 for ADF security support to the 2014 G20 Summit in Brisbane. The cost of the support is being absorbed by Defence.

Current operations at a glance



Source: DAR and 2014-15 PBS. Includes MEAO and Gulf maritime operations.

Indicative deployed personnel numbers, circa May each year.

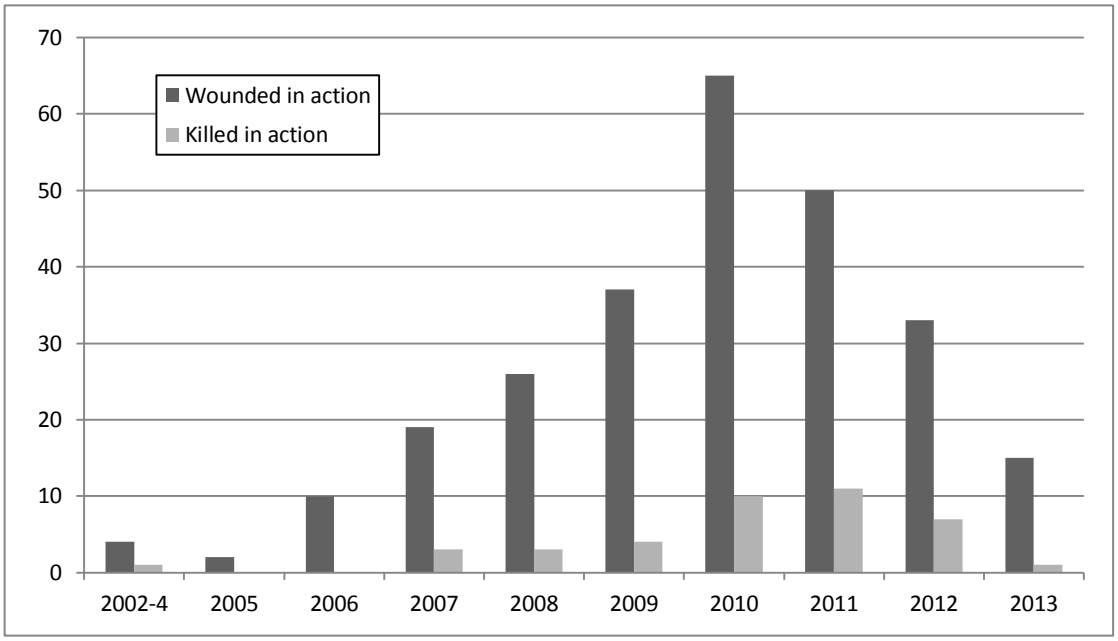


Note: numbers do not include 400-500 personnel on border protection duty.

The human cost of war

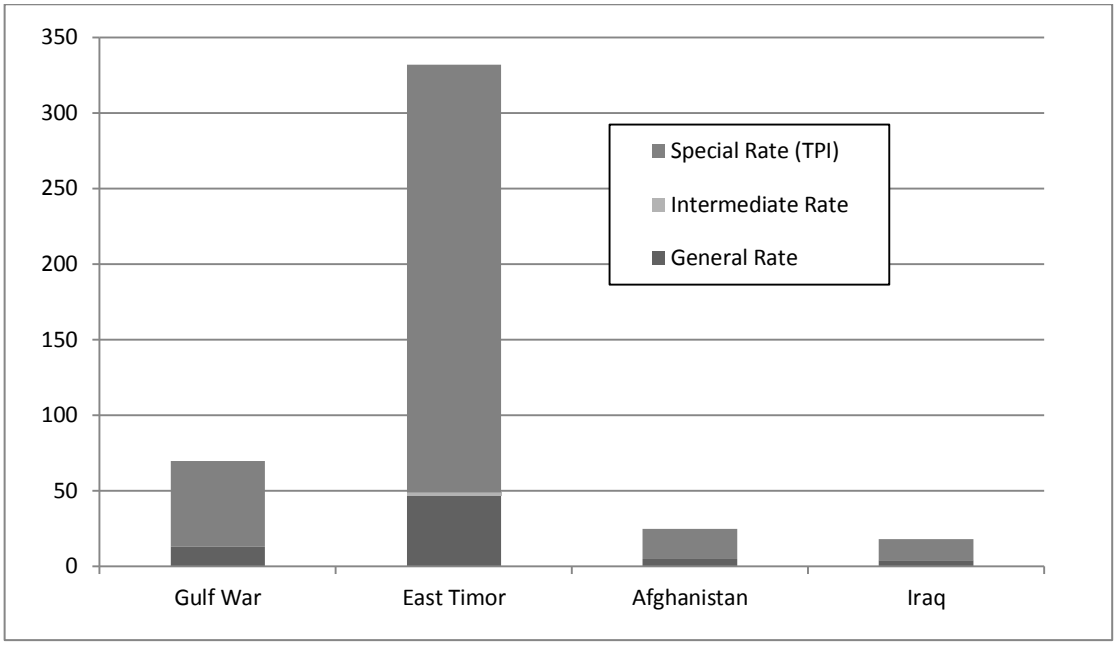
The financial costs of Australia's military deployments do not account for the human cost incurred by deployed personnel and their families. A partial picture of this complex area is reflected in battle casualty statistics and disability pensions awarded to ADF members in recent conflicts. These are presented below in Figures 6.3 and 6.4. In Figure 6.4, the Special rate refers to totally and permanently (or temporarily) incapacitated.

Figure 6.3: Battle casualties in Afghanistan 2002 to 2013



Source: Department of Defence website, data as at 28 October 2013.

Figure 6.4: Pensions arising from recent conflicts



Source: Department of Veteran's Affairs, DVA Pensioner Summary, December 2013.

Chapter 7 – Defence Industry

Key Points

Local defence industry grew two-fold between 1995 and 2006 in terms of revenue, but has remained stagnant since.

Local defence industry is dominated by a handful of foreign-owned companies.

The future of naval shipbuilding in Australia remains ambiguous despite large projects in preparation.

Since at least the 1970s, Australia has aspired to be self-reliant when it comes to its own defence. The caveats and qualifications to what's meant by self-reliance are many and changing, and needn't concern us here. What's important is that everyone agrees that an essential component of self-reliance is a local defence industry that can (at the least) repair, maintain and adapt the equipment used by our defence force.

To this end, successive governments have adopted policies to ensure that Australia's defence industrial base is adequate for the task. This outcome is deemed to be important enough for governments to publish formal defence industry policy statements from time to time. The last such statement was made by the Rudd government in June 2010. In recent years, Defence has also released 'health checks' of particular defence industry sectors as part of an ongoing process of assessment.

There's also a series of mostly long-standing government programs designed to assist local industry. These include support for skills development (≈$23 million p.a.), research and development (≈$30 million p.a.) and export facilitation (≈$11 million p.a.). The government also tries to leverage its foreign arms purchases to allow local firms to bid into global defence materiel supply chains.

Despite the effort and priority accorded to maintaining a healthy local defence industry, there's surprisingly little hard data in the public domain about the size and shape of the sector. This chapter tries to redress that shortfall by collating and analysing what information is available. Our aim is to analyse macro trends, such as the rate of growth and pace of commercial consolidation or diversification. Readers seeking a detailed company-by-company description of the sector should consult the latest *Australian Defence Magazine* (*ADM*) *Top-40 Defence Contractors* (see *ADM* magazine Dec 2013/Jan 2014), a reliable and informative source from which much of the data used here is derived. However, because of its unique status of being 100% government-owned, a detailed analysis of the shipbuilder *ASC Pty Ltd* has also been included along with a discussion of naval shipbuilding more generally, including the pending 'valley-of-death' in demand. Finally a stand-alone discussion of the Landing Helicopter Dock (LHD) project has been included.

Australian Defence Industry

According to the Defence Materiel Organisation (DMO), the Australian defence industry employs around 25-26,000 people (2013-14). Structurally, the sector is dominated by a small number of large prime contractors which account for around 50% of employment. DMO further estimates that there are over 3,000 SMEs operating in local defence industry, mostly as subcontractors to the larger prime contractors. An SME is typically defined as a firm

employing fewer than 200 employees. In most cases, SMEs operating in the defence sector also trade in the civilian economy.

Of the amount spent on materiel acquisition and sustainment in Australia, DMO estimates that around a third goes directly to local SMEs and two-thirds to prime contractors. Some of the money going to prime contractors will flow on down to subcontracting SMEs. DMO advises that in 2013-14, around $5.4 billion was spent in Australia on defence materiel acquisitions ($1.8 billion) and materiel support ($3.6 billion). The latter figure includes $500 million of fuels, oils and lubricants.

Applying a little arithmetic to these official estimates reveals several interesting things. Taking the mid-point in DMO's employment range, 25,500, the average revenue per employee for prime contractors is $282,353, and for non-prime contractors is only $141,176 per employee (excluding fuels, oils and lubricants in each case). The relatively low revenue per employee in defence non-prime contractors probably reflects the fact that they receive further revenue as subcontractors from the primes (i.e. in addition to what they receive directly from Defence). Quite literally, some defence spending gets double handled so the consequential turnover in local defence industry exceeds the amount that Defence initially spends. Assuming that non-prime contractors actually generate revenue per employee at the same rate as large defence firms, total revenue for the sector would be $7.2 billion (of which around $1.8 billion is double counted).

But in absolute terms, even revenue of $282,353 per employee is low compared with the average ($428,100) for Australian manufacturing firms (ABS series 8155 for 2011-12). But this latter figure is inflated by the high output per employee in the large-scale capital-intensive petroleum and primary metal production industries. Arguably better comparators are 'transport equipment manufacture' ($352,100 per employee) and 'machinery and equipment manufacturing' ($325,748 per employee). The remaining difference in revenue per employee probably reflects a combination of three factors: poor economies of scale leading to relatively high fixed labour-intensive administrative overheads, an absence of mechanisation (due to poor economies of scale), and intrinsically labour-intensive software and computer work.

The size of the Australian defence industry sector is compared with manufacturing and Australian industry overall in Table 7.1.

Table 7.1: The scale of Australian defence industry (circa 2010-2013)

	Australian Industry	Australian Manufacturing Sector	Australian Defence Industry
employees	10,727,000	929,000	25,500
revenue ($m)	2,789,052	397,705	7,200
value add ($m)	1,012,252	102,146	*2,025
revenue per employee	$260,000	$428,100	$282,353

*Source: ABS series 8155, DMO and ASPI analysis. *estimated as explained below*

It follows that defence industry accounts for 0.24% of jobs in Australia, equivalent to 2.74% of jobs in the manufacturing sector. In terms of annual revenue, defence industry accounts for 0.26% of Australian industry and 1.81% of the manufacturing sector. Moreover, if we

assume that defence industry results in the same ratio of value added to revenue (33%) as the (relatively high value add) machinery and equipment manufacturing sector, the defence sector gives rise to a value add of $2.4 billion representing only around 0.16% of Australia's GDP. So although Australian defence industry is undoubtedly important for our defence force, it represents only a trifling fraction of the overall Australian economy.

A closer look

Getting below the aggregate data for local defence industry is difficult because there aren't any official statistics on the detailed size and shape of the sector. Fortunately, however, the *ADM* has been surveying local defence contractors since 1995 and has generously made its nineteen years of data available to us. Two points need to be made before proceeding. First, the nature of the survey results in both limitations and uncertainties on the data set—these will be pointed out as we go. Second, ASPI takes full responsibility for the analysis and conclusions that follow. Whatever violence is done to the data is our fault alone.

The best way to understand the data set is to look in detail at the latest results presented in the Dec 2013/Jan2014 edition of the *ADM*. The *Top-40 Defence Contractors* list, as it's known, details the top 40 firms contracted to deliver goods and services to Defence either directly or via sub-contracting work to prime contractors. This includes not only defence materiel production and maintenance, but also functions such as catering, cleaning and facilities construction. Because these latter activities draw services from the highly competitive broader economy, they're of less interest to us and are therefore excluded as far as possible in what follows.

This isn't to imply that such suppliers are irrelevant to the operation of the ADF—far from it, they're absolutely essential. But our concern is with companies with specialist defence materiel knowledge that are usually highly dependent upon defence contracts for survival. Irrespective of what Defence might do, there will always be companies ready to build facilities, cook meals, clean buildings, mow lawns and transport goods. The same isn't true of firms capable of supplying and sustaining military equipment, hence our focus.

Table 7.2 lists the *ADM Top-40* for 2013 with defence materiel and non-defence materiel companies separated. Some companies straddle the boundary between providing civil and defence specific items, particularly in the information and telecommunications sector. We've done our best to assign such companies on the balance of their activities.

It should also be kept in mind that the *ADM Top-40* survey is voluntary and from time to time companies have chosen not to participate—sometimes reflecting a policy of non-disclosure.

Table 7.2: *ADM Top-40* Defence Contractors 2013

		Revenue ($m)	Personnel	Revenue per employee ('000s)
	Predominately defence materiel contractors			
1	BAE Systems Australia	1,400	5,000	280
2	ASC Pty Ltd	915.7	2,400	382
3	Thales Australia	795	3200	248
4	Raytheon Australia Pty Ltd	711	1252	568
5	Australian Aerospace Limited	540	1300	415
9	Transfield Services Limited	290	1,200	242
10	Boeing Defence Australia	273.5	1200	228
11	Lockheed Martin Australia Pty Limited	270	900	300
13	Saab Australia Pty Ltd	182.8	296	618
15	ESS Support Services Worldwide (ESS)	110	650	169
17	Qantas Defence Services	99.9	290	344
18	Austal	88	470	187
19	SAFRAN Pacific	87	210	414
20	Sikorsky Helitech	85	185	459
21	CSC Australia	82	500	164
21	Elbit Systems of Australia Pty Ltd (ELSA)	82	123	667
24	Babcock Pty Ltd	67	343	195
25	Nova Systems	60	220	273
25	CAE Australia Pty Ltd	60	152	395
27	Qinetiq Pty Ltd	55	300	183
30	Rockwell Collins	44	85	518
32	CEA Technologies Pty Ltd	43.4	280	155
33	Airbus Military	39.5	10	3950
34	KBR, Defence & Government Services	36.5	242	151
35	Chemring Australia	36	86	419
37	L-3 Oceania	35	100	350
38	Hawker Pacific Pty Ltd	34.7	684	51
39	Australian Defence Apparel Pty Ltd (ADA)	32.5	181	180
40	Safe Air Limited	30	170	176
40	General Dynamics Land Systems - Australia	30	80	375
	Total	**6,615**	**22,109**	**435**
	Predominately non-defence materiel			
6	John Holland Group Pty Ltd	435.8	?	
7	Serco Sodexo Defence Services Pty Ltd	332	2800	119
8	Spotless Group Limited	310	950	326
12	Serco Systems	225	400	563
14	Aspen Medical	163	2182	75
16	IBM Australia Limited	102.5	260	394
23	Accenture	72.4	?	
28	Adagold Aviation Pty Ltd	48.5	11	4409
29	Sinclair Knight Merz (SKM)	44.8	?	
30	GHD Pty Ltd	44	?	
35	DHL Global Forwarding	36	?	
	Total	**1814**		

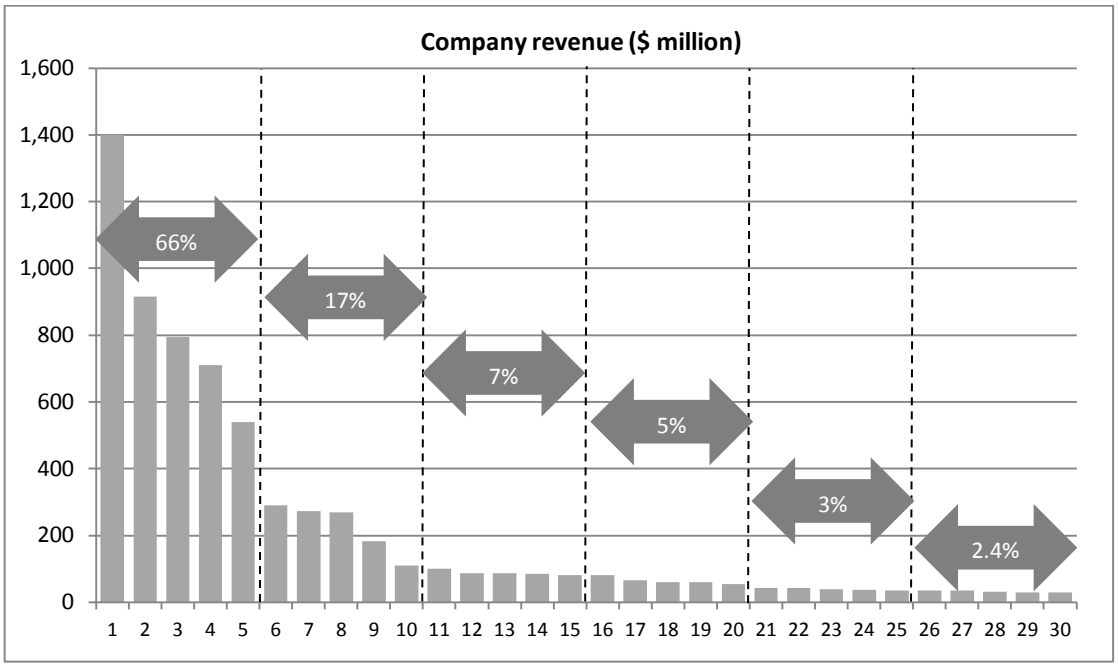
Source: ADM Top-40 Defence Contractors –1995-2013, published by Australian Defence Magazine, Dec/Jan edition each year.

Surveying the data reveals several interesting things. To start with, several companies have surprisingly low revenues per employee, as low as $51,000 in one instance, which probably reflects an overstatement of the number of employees engaged in defence work within the firm. Conversely, a number of firms have surprisingly high revenues per employee, of the sort more commonly attached to large-scale capital-intensive primary production. Setting aside the possibility that Defence is simply paying egregious monopoly rents, there are two likely explanations. First, some firms might have included revenue earned from retailing imported equipment. Indeed, several of the companies in question import weapons systems on a large scale. Second, other firms (particularly in the facilities construction sector) have a natural heavy reliance on subcontractors.

Taking the data at face value, it says that the top thirty contractors by defence revenue have a collective turnover of $6.6 billion and employ around 22,100 people, implying average revenue per employee of $299,000 a year. In comparison, DMO estimate average turnover at $200,000 to $250,000 per employee on the basis of other sources. These figures are broadly commensurate with those derived earlier from Defence's estimate of employment in the sector.

Over the past eighteen years, the top five firms in any given year have accounted for, on average, 65% of total revenue of defence materiel contractors in the *ADM Top-40*. In 2013, as shown in Figure 7.1, that share was 66%.

Figure 7.1: Revenue distribution for *ADM Top-40* 2013



Source: ADM Top-40 Defence Contractors –1995-2013, published by Australian Defence Magazine, Dec/Jan edition each year.

The actual companies in the top five change from year to year as contracts ebb and flow. Yet the current major players are easily identified. Table 7.3 reproduces the key prime contractors identified in the government's 2010 defence industry policy statement. It's important to note that only one of the firms—the government-owned ASC Pty Ltd—is

controlled by an Australian-based entity, with the remainder split between the United States and Europe.

Table 7.3: Key Australia-based prime contractors

Prime	Parent company or owner	Country of origin	Key activities	Per cent of parent revenues	Stock exchange listing
ASC Pty Ltd	Australian Government	Australia	submarines and ships	n/a	n/a
Australian Aerospace	EADS	France, Germany & Spain	helicopters	< 1	Paris
BAE Systems Australia	BAE	United Kingdom	varied	3.2	London
Boeing Defence Australia	Boeing	United States	aerospace	0.5	New York
Raytheon Australia	Raytheon	United States	systems integration	1.3	New York
Saab Systems	Saab AB	Sweden	land and maritime	3.1	Stockholm
Lockheed Martin Australia	Lockheed Martin	United States	electronic and information systems	<1	New York
Thales Australia	Thales	France	maritime and varied	2	Paris

Source: 2010 Defence Industry Policy Statement.

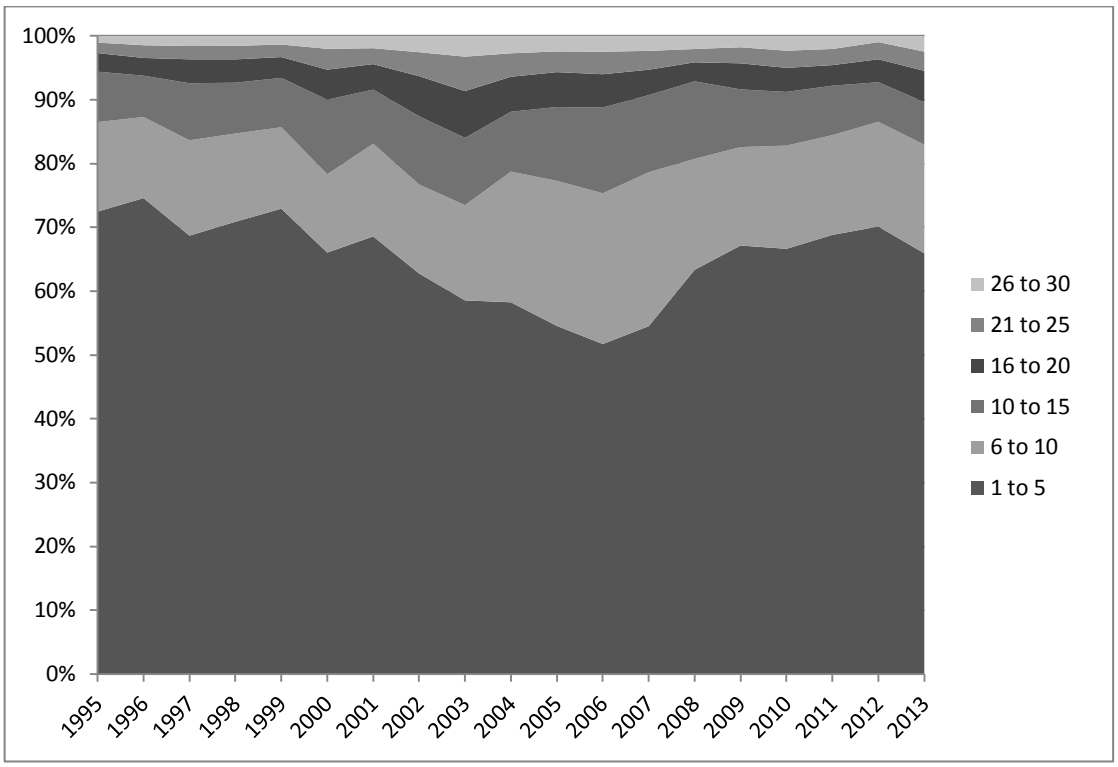
Foreign ownership of our key prime defence contractors brings benefits and risks. On the plus side, we undoubtedly get better access to foreign weapons systems than we otherwise would. In addition, foreign subsidiaries in Australia can 'reach back' to their parent owners for skilled personnel, knowledge and intellectual property. And because we have relationships with arms manufacturers on both sides of the Atlantic, competitive pressures can in theory be brought to bear when making purchases.

On the minus side, because foreign-owned Australian primes account for very small shares of parent company revenue, they're unlikely to command priority if a commercial or strategic conflict of interest arises. For example, if a foreign parent has to choose between supplying Australia or its home country with munitions in a crisis, there's no question about what will happen. In most areas this is unavoidable; Australia doesn't have sufficient demand to support fully indigenous defence industrial capabilities in all but a limited range of niche areas. Choosing and maintaining such capabilities is a strategic challenge of the first order.

The relatively small number of prime contractors operating in Australia is consistent with the consolidation of defence manufacturing that has been underway in Europe and the United States since 1945 and which accelerated following the end of the Cold War. However, in our particular case, the local cycle of having a small number of large defence projects dominating spending at any one time is probably also important. It's perhaps noteworthy that revenue among local defence firms broadened between 1995 and 2006 (as the Anzac and Collins programs were completed) and narrowed again between 2006 and 2012 (see

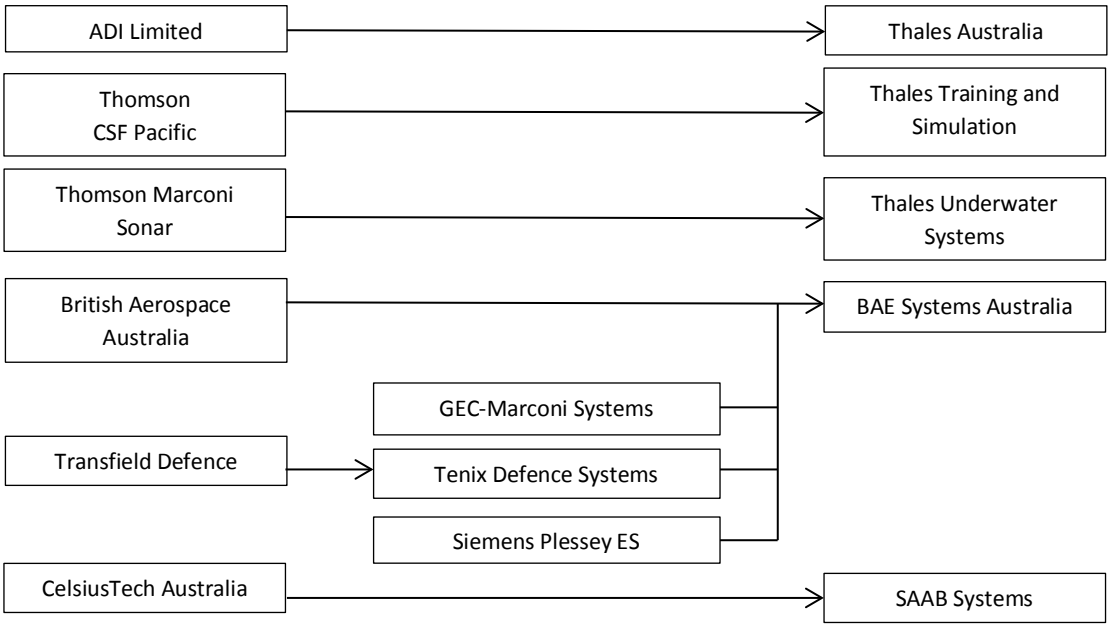
Figure 7.2). The consolidation of various local companies over the years might have also played a role. Some of the key mergers and acquisitions are depicted in Figure 7.3.

Figure 7.2: Revenue distribution for top-30 defence contractors 1995 to 2013



Source: ADM Top-40 Defence Contractors –1995-2013, published by Australian Defence Magazine, Dec/Jan edition each year.

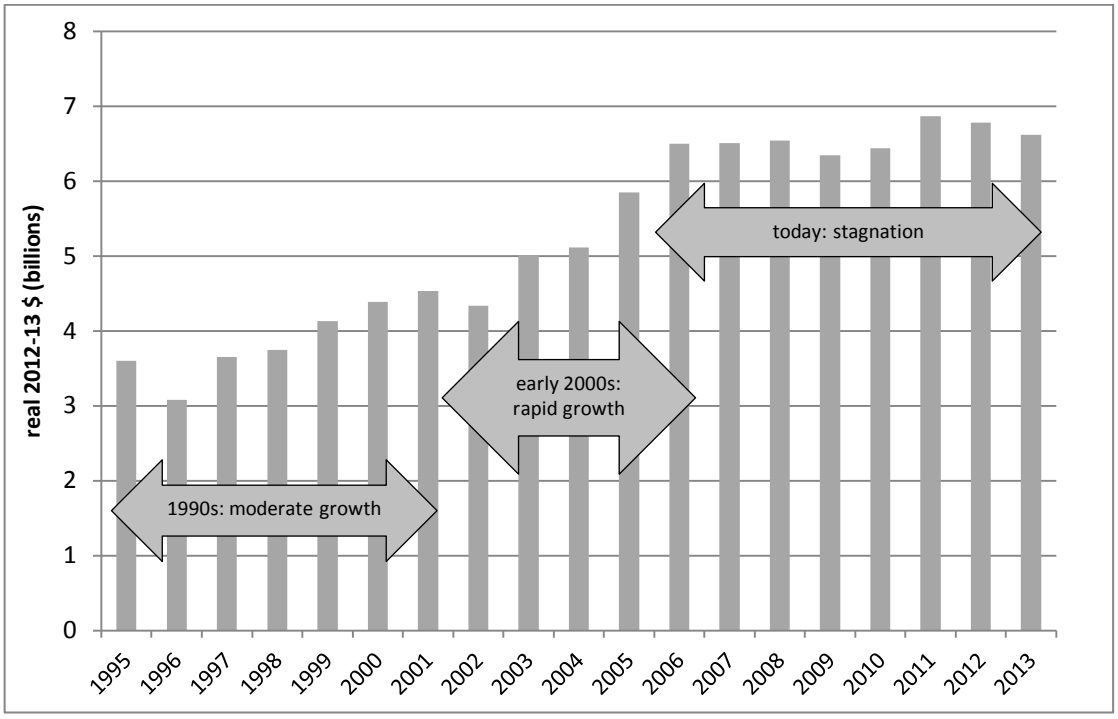
Figure 7.3: Key mergers, acquisitions and name changes in local defence industry



With nineteen years of data on local defence industry, the obvious question is whether the sector has grown or contracted over time. Figure 7.4 provides the answer using the Consumer Price Index to inflate historical data. Because total revenues are dominated by a

small number of large turnover firms every year, changes to the *ADM Top-40* over time are a credible indicator of trends in the sector. Roughly speaking, the size of the sector in revenue terms has almost doubled since the mid-1990s. Looking more closely, three eras can be identified; moderate growth during the late 1990s, rapid growth in the early- to mid-2000s, and stagnation over the past six years at a higher than usual level. It's not surprising that revenues grew in the years following the 2000 White Paper as extra money flowed into Defence. Similarly, the mounting deferrals of investment and various efficiency measures of recent years broadly accord with the observed stagnation in growth.

Figure 7.4: Growth and stagnation: Turnover of defence materiel contractors in *ADM Top 40*



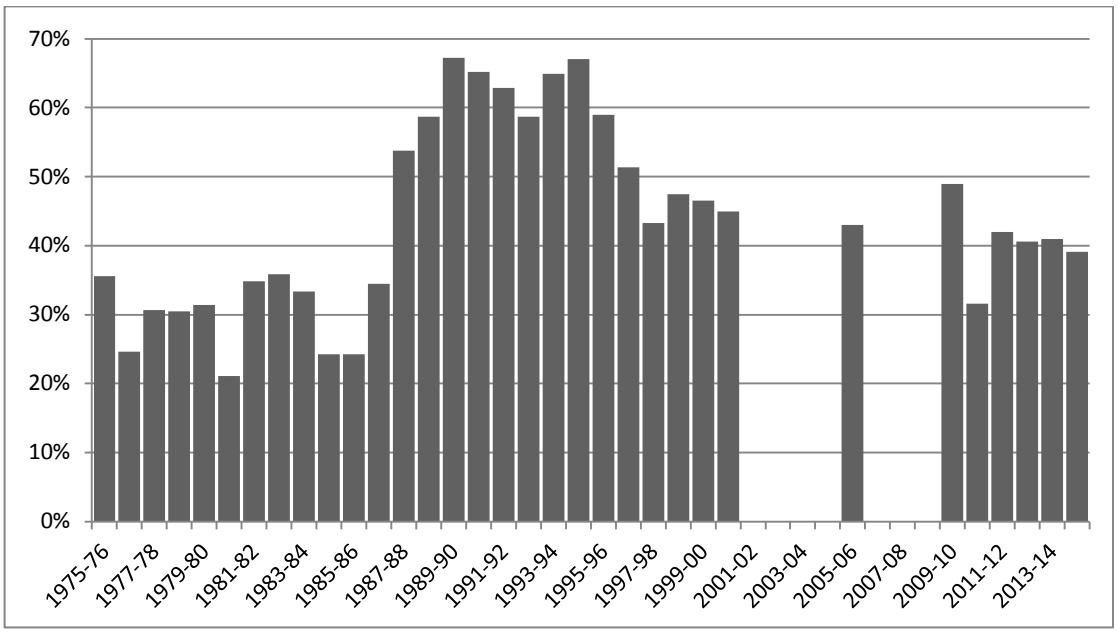
Source: ADM Top-40 Defence Contractors –1995-2013, published by Australian Defence Magazine, Dec/Jan edition each year.

At this point it's natural to compare the trends in local defence industry with spending by Defence on materiel. However, this can only be done with the caveat that repeated changes to Defence's accounting rules and reporting make this difficult, as does the absence and unreliability of data in the years around the turn of the century. Our best attempt to make sense of the available data appears in Figure 7.5. It looks as though the share of local work rose and fell with the wave of large naval construction and aviation upgrades in the 1990s.

It's possible that the levelling off in revenue for local firms after 2006 (and the corresponding reduced share of total investment) also reflects the increasing tendency of governments to purchase equipment off-the-shelf from foreign suppliers. Recent examples include the 24 F/A-18 Super Hornet fighters and five C-17 Globemaster transport aircraft. Fortunately, the United States Government collects and discloses detailed information on commercial and government-to-government arms exports through the US Foreign Military Sales (FMS) program. Similarly, the European Union publishes the value of export licences granted each year. Historical trends in US and EU defence exports to Australia are shown in Figure 7.6, where it should be noted that the figures include both equipment acquisitions and sustainment goods and services such as spare parts and repair of rotable items. To allow

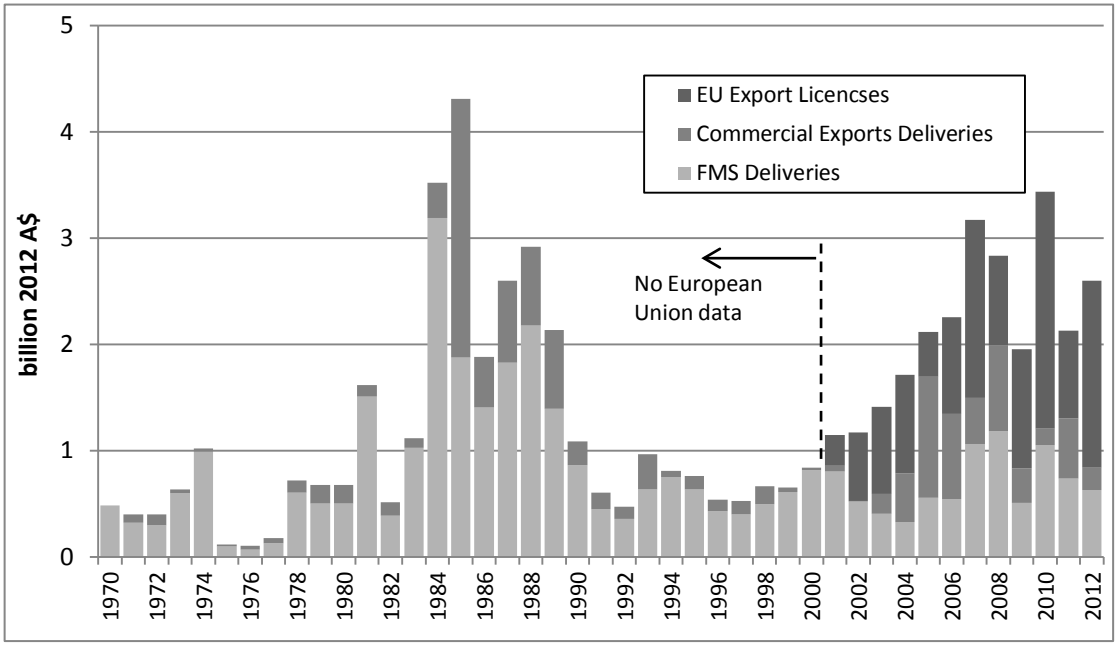
comparison, the value of each year's exports has been converted from US and Euro to Australian dollars at the prevailing exchange rate before being translated into 2012 dollars.

Figure 7.5: Percentage of equipment by cost purchased locally 1975 to 2014-15



Source: Defence Annual Reports and FAD&T SLC Question on Notice 44, 29 May 2012.

Figure 7.6: US defence exports and European Union export licences to Australia (billion 2012 A$)



Source: Data from US Security Cooperation Agency, US State Department export controls reports, EU arms exports reporting.

Conclusion

Hopefully, the brief analysis presented here will provide grist for the mill for those interested in the local defence industry. To the extent that conclusions can be drawn from the data, the picture is mixed. While the past decade and a half has seen the scale of local industry grow substantially, growth has all but stalled since around 2007. The likely main reasons are slowing defence investment and a rise in imports. Accordingly, the future prospects for local

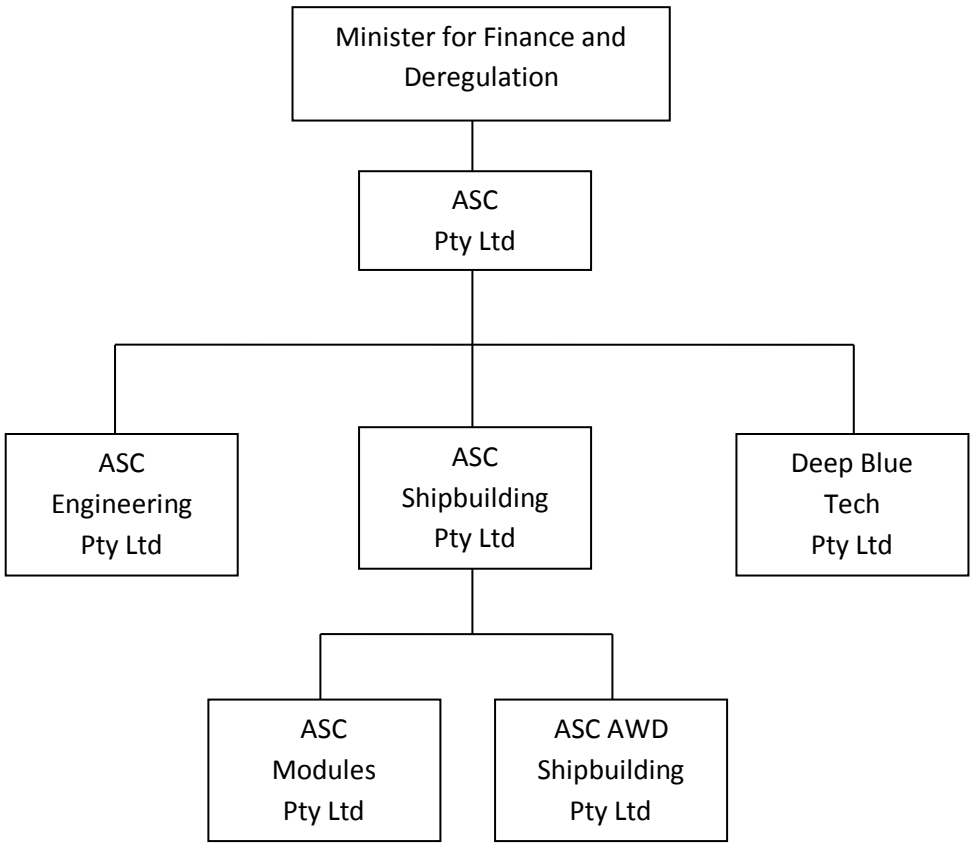
industry will depend on whether and how quickly defence spending recovers from the current retrenchment and the extent to which future purchases come from offshore.

ASC Pty Ltd (formerly the Australian Submarine Corporation)

The Australian Submarine Corporation was formed in 1985, and in 1987 was awarded the contract to build six Collins class submarines. Initially, ownership of the corporation was shared between the Australian Government, submarine designer Kockums of Sweden, Wormald International and Chicago Bridge and Iron, but by 1991 only Kockums and the government remained shareholders. In 2000, the Australian Government bought out Kockums and became the sole owner.

Overview

At present, ASC is operated as a Government Business Enterprise (GBE) under the *Commonwealth Authorities and Companies Act 1997* with the Minister for Finance as sole shareholder. Consistent with its status as a GBE, the company has a board made up of executive and non-executive members. The corporate structure appears below.



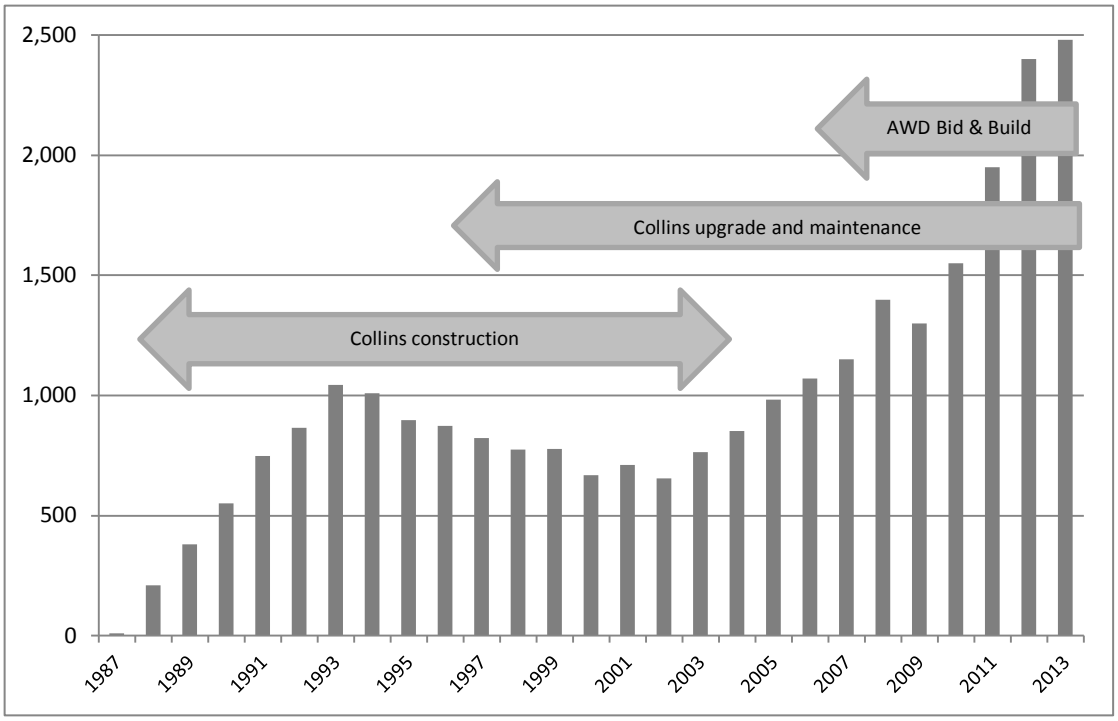
The three direct subsidiaries of ASC reflect the diversification of ASC into areas beyond the construction, upgrade and maintenance of the Collins class. *ASC Engineering* was established to undertake the design, construction and project management of civil heavy engineering projects. At present, *ASC Engineering* isn't an active entity. *Deep Blue Tech* was established to secure a role in the design of the Collins class replacement. With around 60 personnel, *Deep Blue Tech* is working on options for the future submarine. The largest of the three entities, A*SC Shipbuilding,* was established to bid for what has become the $8.1 billion Air

Warfare Destroyer project for the RAN. Its two subsidiaries *ASC Modules* and *ASC AWD Shipbuilding* were created to operate within the *AWD Alliance*, which we explore in detail in the next section. ASC also runs a submarine training school for the RAN that's based in WA.

Putting aside the latent *ASC Engineering* and nascent *Deep Blue Tech,* there are two main projects underway at ASC: the construction of the AWD, and sustainment and upgrade of the Collins fleet. The former occurs at the 'ASC South' facility at Osborne SA while the latter occurs mostly at the (original) 'ASC North' facility at Osborne SA. Some additional submarine work is also undertaken at 'ASC West' in WA near the RAN submarine homeport. ASC South and ASC North are separated by the SA Government's taxpayer-funded Common User Facility which includes the massive ship-lift and hardstand being used for the consolidation and later launch of the three AWDs by ASC.

There are two ways to track the scale of activity at ASC over time: financial turnover and personnel numbers. As shown in Figure 7.7, the ASC workforce grew during the construction of the Collins fleet and fell before rising again as the full volume of Collins class remediation, upgrade and maintenance work was felt. In recent days, the ASC workforce has grown to around 2,480 as the AWD workload approaches its maximum.

Figure 7.7: ASC workforce 1987 to 2013

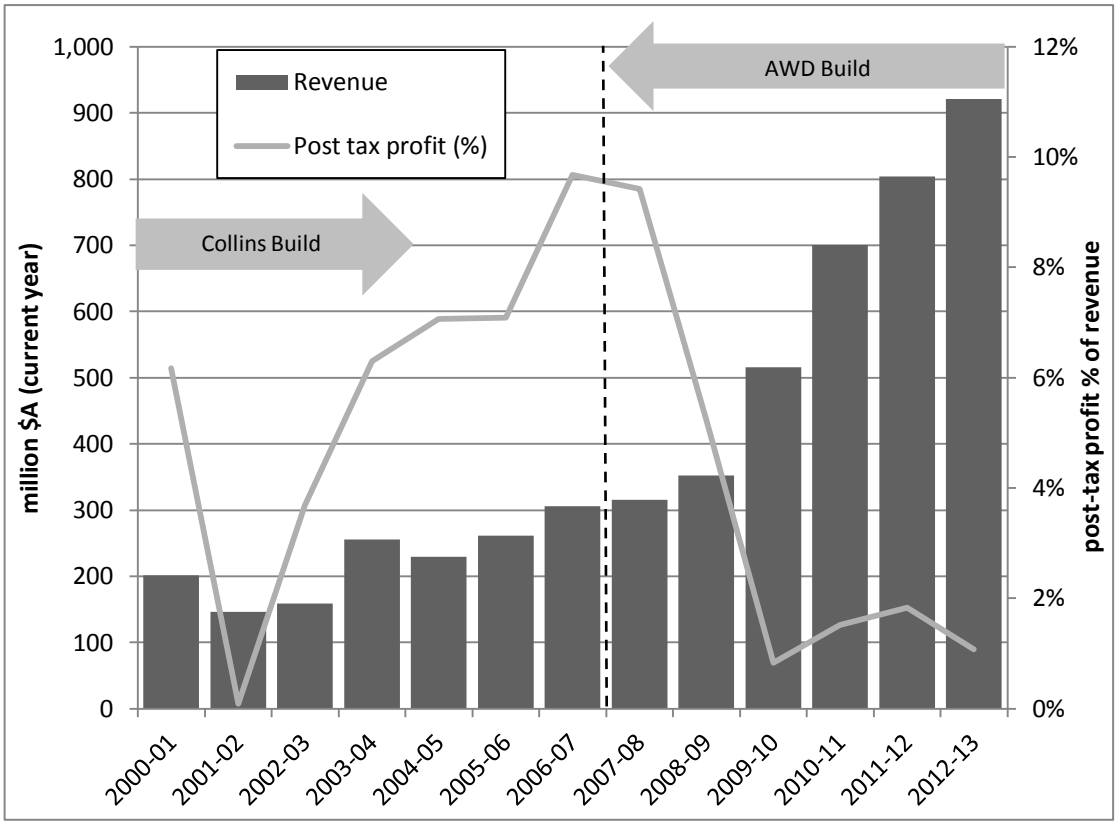


Source: ASC Pty Ltd Annual Reports

Only a small number of personnel were employed by ASC on the AWD project prior to 2006 (and even in that year the AWD workforce was only about 60 staff). Consequently, by the middle of the last decade, the size of the ASC workforce engaged in submarine post-construction work was close to the peak reached during the Collins construction program twelve years earlier. This demonstrates the relative high labour-intensity of Collins through-life-support compared with construction.

The consolidated corporate turnover and profit for recent years is shown below in Figure 7.8, where the increase in revenue after the commencement of AWD construction in mid-2007 is clear. Note, however, that ASC's after-tax profit as a share of revenue fell from 9.7% in 2007 to 1.1% 2013. In at least the first part of the period, this reflects a decision to reinvest profits back into the business, including into facilities and *Deep Blue Tech*.

Figure 7.8: ASC Key Financial Results



Source: ASC Pty Ltd Annual Reports

We now turn to examine in Dickensian fashion the various activities of ASC in a little more detail before concluding with some observations about its future ownership.

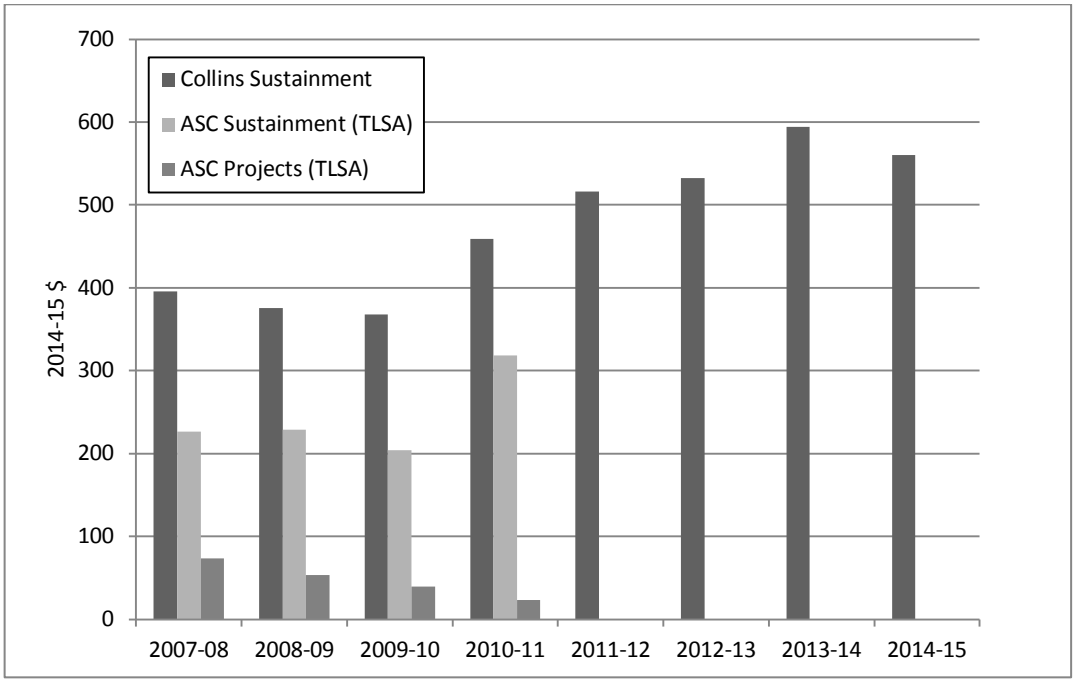
The ghost of submarines past—Collins through-life support

For reasons that we don't understand, Defence failed to have a through-life-support strategy or contract in place for the Collins class at the end of the construction program. Instead, ASC undertook piecemeal work as requested to maintain, repair and upgrade the fleet. In 2003, a long-term Through Life Support Agreement (TLSA) was established between Defence and ASC. Nominally a 15-year $3.5 billion agreement, the TLSA is essentially a cost-plus contract with limited options for incentives and sanctions.

Because we don't know the price paid each year to ASC to maintain the Collins, we have to rely on the reported total sustainment costs for an indication of costs. Note that total sustainment costs include many things that don't result in payments to ASC (such as fuel and government furnished equipment). In particular, sustainment of mission system items such as sonar, combat system and electronic warfare is provided separately by other suppliers through DMO. Total sustainment costs for the Collins fleet are given in Figure 7.9, beginning

with the first year that data is available, 2007-08. To allow a comparison over time, historical costs have been inflated using the 2.5% deflator applied to the Defence budget. Known payments to ASC under the TLSA for sustainment and projects have also been included.

Figure 7.9: Total annual Collins class sustainment costs



Source: Defence Annual Reports, 2013-14 PAES, 2014-15 PBS and FAD&T QoN 19, 17 October 2012 & Q196, 28/29 May 2012.

Caution must be exercised when inferring anything from Figure 7.9. Large year-to-year fluctuations naturally arise due to the timing of full-cycle-dockings, spares purchases, and the number of boats actually being operated by the RAN (as opposed to lying idle absent a crew).

Notwithstanding these uncertainties, the overall cost of sustaining the Collins fleet is perceived to be high. Coupled with long-standing problems with the availability and reliability of the vessels, this has led to three initiatives that are reshaping the sustainment of the fleet and ASC's role therein.

First, ASC has a comprehensive program to boost labour productivity. As a government-owned entity working under what are effectively cost-plus contracts, it would be surprising if inefficiency hadn't crept in over time. Initial reports confirm this to be the case, with substantial improvements achieved over the past couple of years—including a boost in labour utilisation from 30% to 75% in some areas.

Second, in June 2012 Defence and ASC agreed to a performance-based In-Service Support Contract (ISSC). By moving away from cost-plus reimbursement for work, ASC will have strong incentives to continue productivity and performance improvements within its business.

Third, the government is implementing the recommendations of a review of Collins sustainment undertaken by an independent expert, Mr John Cole. The phase one report, which was delivered in December 2011, identified a host of problems within and between

Defence, DMO, Navy and ASC that contribute to poor and/or costly outcomes for Collins class sustainment. The phase two report was delivered in December 2012 and suggested the following target levels for the Collins fleet:

- 2 boats available 100% of the time
- 3 boats available 90% of the time
- 4 boats available 50% of the time.

The report made 25 recommendations for how to achieve this, including reducing the length of full-cycle dockings from three to two years, moving to a cycle involving a one-year mid-cycle docking and six-month intermediate dockings, and appointing a Transformation Manager to implement the report's recommendations.

A follow-up report released in April 2014 concluded that 'submarine availability has improved significantly with the submarine force achieving usually two and frequently three submarines materially available on any one day' as measured over successive financial years. The improvement is attributable to a combination of 'greatly enhanced availability of spares, [fewer] planned maintenance over-runs, few breakdowns and faster repairs to operational boats'.

In the longer term, to meet the targeted availability of the vessels it's critical that major refits are completed in two years. The first two year Full-Cycle Docking is due to commence in June 2014 (HMAS *Farncomb*) and will be a major test for ASC and the new maintenance regime.

Overall then, it looks as though the arrangements for sustainment of the Collins class have finally been put on a solid technical and commercial base and, so far, the results are very encouraging.

The ghost of ships present—the Air Warfare Destroyer project

In October 2001, the last of the RAN's three Charles F Adams class DDG destroyers, HMAS *Brisbane*, was decommissioned, leaving a capability gap in the area of fleet air defence. The 2000 Defence White Paper (produced sometime after the stable door had been left wide open) included Project SEA 4000 *Air Warfare Destroyer* to redress the shortfall. After preliminary studies in the first half of the decade, the project effectively gained first pass approval in mid-2005 when two companies, *ASC Shipbuilding* and *Raytheon Australia,* were selected as alliance partners to work with Defence to take the proposal forward to second pass. A third firm, *Gibbs and Cox,* was designated as the preferred designer*,* with Spanish builder *Navantia* also engaged as a design partner.

Two options were developed for second pass consideration: an Australianised (and smaller) version of the US DDG-51 Arleigh Burke destroyer, the so-called 'baby Burke', and the military-off-the-shelf Spanish F-100 frigate with an Australianised combat system. In each case, the core of the combat system was to be the Lockheed Martin Aegis system with its phased array radar. Purchase of the combat system commenced in 2006 under an FMS program with the US Government.

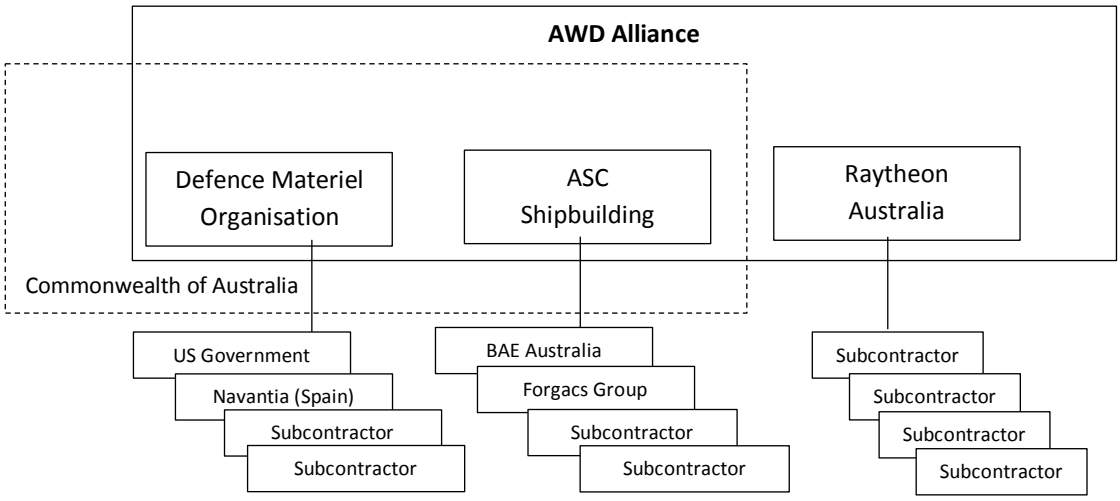
When the F-100 was announced as the winner in June 2007, some people were surprised. Gibbs and Cox, the designer of the DDG-51, had been designated as the 'preferred designer' of the evolved option back in 2005 and many perceived the F-100 as a 'stalking horse' to put commercial pressure on the US option. As it turned out, the extra cost and risk associated with a scaled-down but on-paper-only DDG-51 tipped the balance in favour of the smaller pre-existing Spanish vessel.

From the commencement of the project through to second pass, a total of $251 million was spent, excluding long lead-time purchases for the Aegis combat system. Most of the money (roughly $211 million) was spent in the two years between mid-2005 and mid-2007. It remains to be explained how so much money was spent simply to make a decision between two designs.

The *AWD Alliance,* as it's known, involves three parties in a contractual arrangement, which is novel for Australian Defence (see Figure 7.10). ASC is the designated shipbuilder, Raytheon Australia is the combat system integrator and DMO acts as both the customer on behalf of the RAN (and ultimately the Commonwealth) and as a full participant in the alliance. Governance is exercised by a Board made up of representatives of the three parties with a commitment to consensus decision-making.

The alliance is predicated upon an 'equitable sharing of risks and rewards' between the three participants. In practice, this revolves around achieving a Target Cost Estimate (TCE) for the project that was developed back in 2007. The TCE is around $4.5 billion for the work covered by the alliance. This includes the direct recovery cost of planned activities by the participants and their respective subcontractors. The remainder of the overall $8 billion project cost involves other expenses to be covered directly by DMO, including government furnished equipment such as the Aegis combat system.

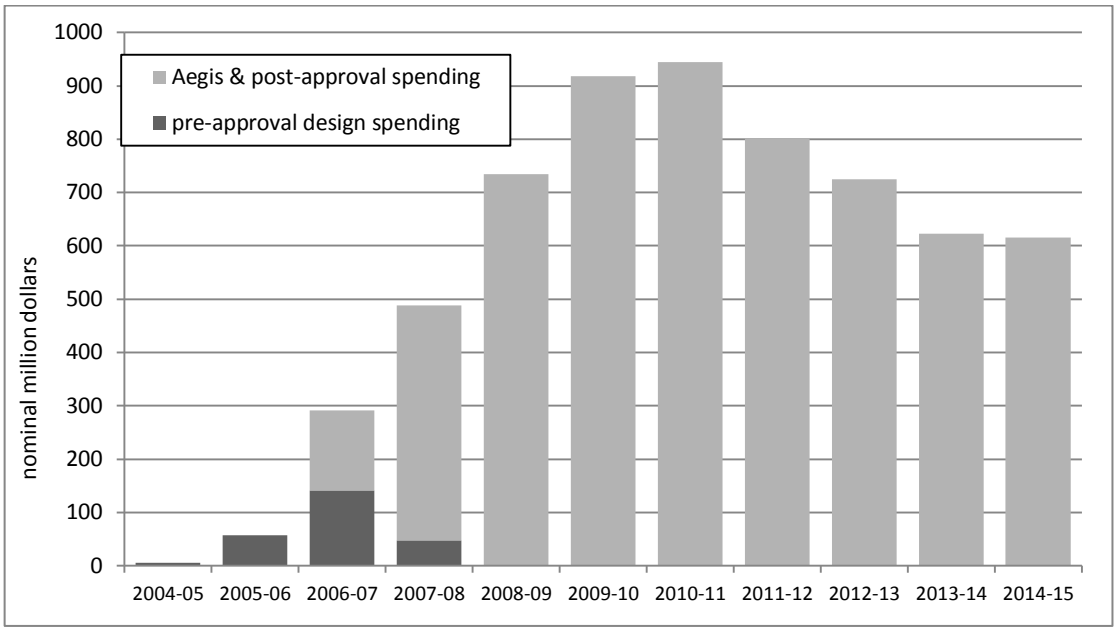
Figure 7.10: The AWD Alliance



Last year's budget brief included an extensive discussion of the alliance contracting framework and its incentives (perverse and otherwise). Rather than repeat that material this year, we turn now to look at how the project has been going.

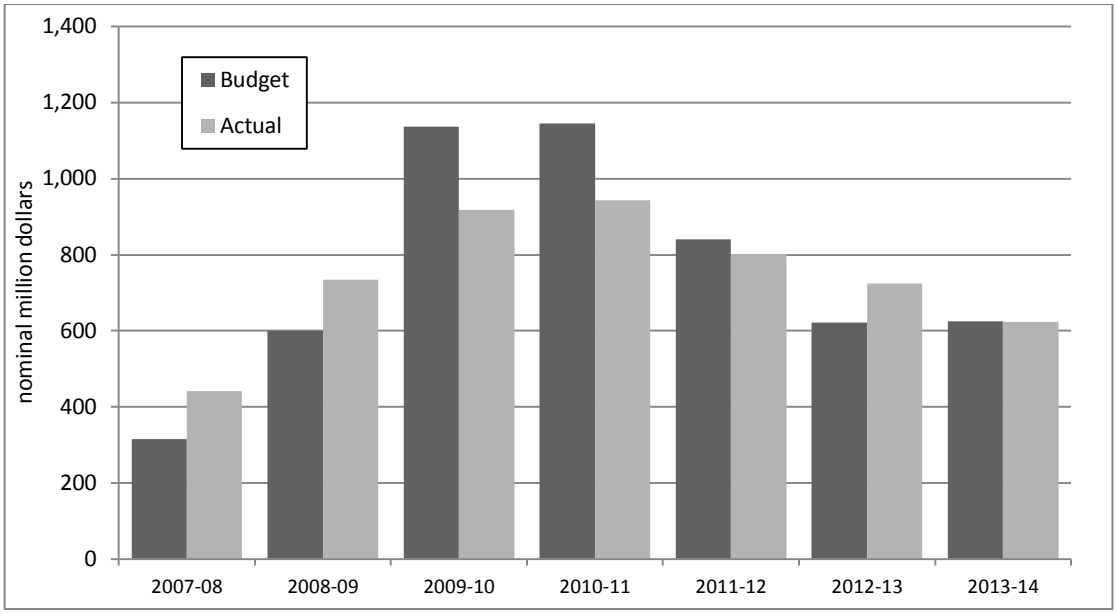
According to ASC Ltd, the AWD project was 50.5% complete as at June 2012 and 69.9% complete as at June 2013. To date, the build phase of the project has spent $5,192 million from an approved project budget of $7,848 million, representing about 66% of available funds. Some care needs to be taken in inferring progress from aggregate expenditure because a significant share of the budget is allocated to the combat system and weapons purchases, which are somewhat unrelated to the progress in physical construction. A better measure comes from comparing planned and actual expenditure on a year-by-year basis as in Figure 7.12. As can be seen, the project exceeded its spending targets for the first two years, fell well short for the next two, but came close to planned expenditure targets over the past two years.

Figure 7.11: AWD expenditure ($m)



Source: Defence Annual Reports and 2014-15 PBS

Figure 7.12: Planned and actual expenditure ($m)



Source: Defence Annual Reports and 2013-14 PAES

At the time of second pass approval, the first AWD was scheduled to be delivered in December 2014, the second in March 2016 and the third in June 2017. Due to early problems with the construction of modules, the schedule for the delivery of the first AWD has slipped by twelve months to December 2015.

Specific issues included the difficulty of activating new, and reactivating long unused fabrication operations, as well as problems with learning to work with the style of drawing provided by the Spanish designer. As a result, responsibility for fabricating 18 of the 90 modules was reallocated in May 2011. Then, in March 2012, a further reallocation of modules occurred, resulting in additional work going offshore to Spain. The allocation of module construction as at June 2013 was:

Ship 1: ASC 8, BAE Systems 7, Forgacs 14, Navantia 1, MG Engineering 1.

Ship 2: ASC 7, BAE Systems 4, Forgacs 13, Navantia 6, MG Engineering 1.

Ship 1: ASC 7, BAE Systems 4, Forgacs 13, Navantia 6, MG Engineering 1.

When the module work was reallocated it was hoped that the changes, coupled with refinements within the consolidation yard, would be sufficient to make the revised schedule feasible. Indeed, work was well underway on the fabrication of the first two vessels and work had commenced on modules for the third.

However, in September 2012 it was announced that there would be a further delay to AWD delivery. The formal announcement was unhelpfully ambiguous about the reasons for the delay. On the one hand it said that the 'revised AWD plan will reduce peak demand on project critical resources and facilities, and reduces project risk'. On the other, it said that 'the delay will help avoid a decline in naval shipbuilding skills before the commencement of Australia's largest and most complex naval project—the Future Submarine'.

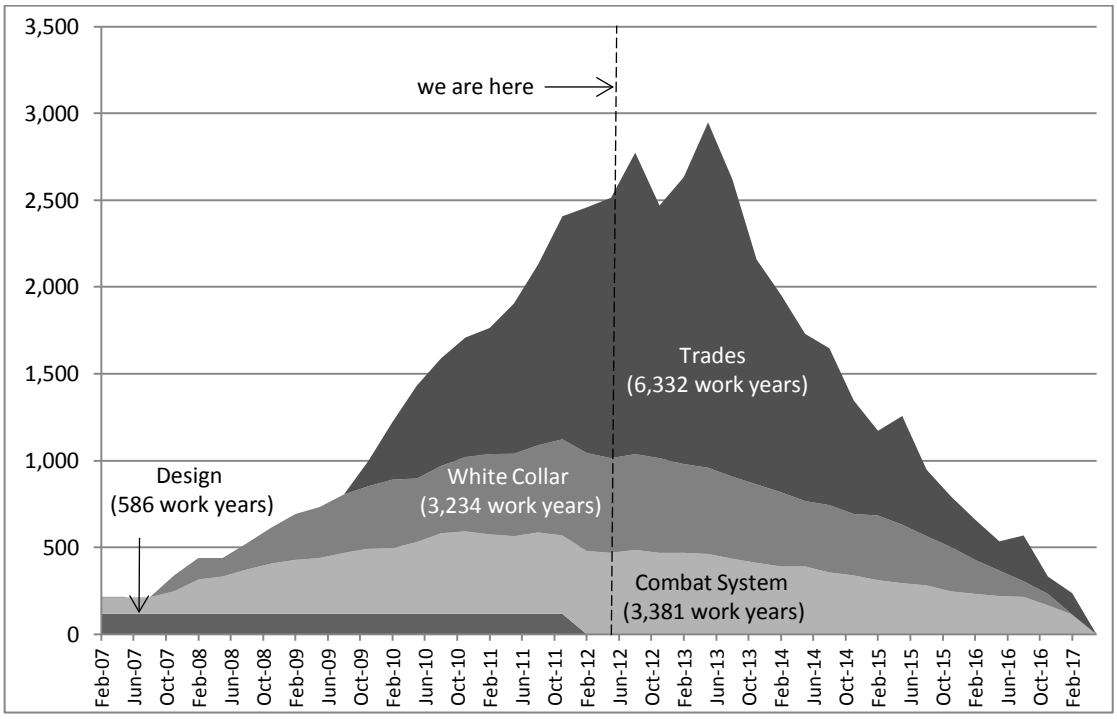
Table 7.4: Progressive delivery schedule for the AWD project

	Original delivery date	2011 reschedule	2012 reschedule
HMAS *Hobart*	December 2014	December 2015	March 2016
HMAS *Brisbane*	March 2016	March 2017	September 2017
HMAS *Sydney*	June 2017	June 2018	March 2019

Source: Various Ministerial Media Releases.

It's unlikely the preservation of naval shipbuilding skills was a significant factor in bringing about the delay. As Figure 7.13 shows, most of the workforce was planned to have dissipated well prior to the delivery of the final vessel, so even with the additional nine-month delay for the final vessel, most of the workforce will have moved on from the maritime sector by 2016.

Figure 7.13: AWD workforce demands – alliance plus local contractors



Source: presentation by Defence official, January 2012

What's more, the skills needed at the end of a shipbuilding project are different to those needed at the start of a submarine project. Add to this that the Future Submarine project isn't due for second pass consideration until 2016–17 at the earliest, and it's clear that maintaining skills in the sector for that purpose was largely irrelevant to the reschedule.

One way that the workforce issue might be relevant (now if not necessarily back at the time of the announced delay) is if the government brings forward other work in the maritime sector, such as the Future Frigates. This possibility is discussed in the next section.

Finally, there's a curious point to be considered about the announcement of the delays. According to the Minister, the 'new schedule won't increase the cost of the project'. At first blush, this is difficult to make sense of, at least from an industrial production perspective. By extending the project by nine months, the overheads due to the fixed administrative and engineering workforces will be extended, as will facilities operations costs. So even if the actual blue-collar production activity can be rescheduled at zero cost (which it probably can for a large project such as the AWD), additional costs will still arise in the production process.

Of course, that doesn't necessarily mean that the price of the project to the government has to rise. One explanation for the ready embrace of the delays by industry is that it was having trouble delivering on schedule and was happy to be cut some slack. So happy in fact, that it was willing to bear the additional cost of an extended production schedule in order to avoid the risk of larger losses due to missed deadlines over the next few years.

According to DMO's 2013 *Future Submarine Industry Skills Plan* (FSISP) the financial consequence of the delays to the AWD project has been in the order of $200 million, which it attributes to 'lack of experience across production engineering and production

supervision'. An alternative measure of the impact of the delays can be garnered from the shipbuilding workforce profiles provided in the FSISP for the period prior, and subsequent, to the delays (Scenario 2 verses Scenario 5). The workforce demands in the charts group together the LHD and AWD projects, but since the LHD project is apparently going well, the difference must be due to the extension of the AWD schedule. With a sharp pencil and a little care, the additional workload can be measured. The result is around an additional 2,153 work-years (representing 19% of the total) to complete the project.

According to an ANAO report released in March 2014, it was estimated in November 2012 that 'the contract for the construction of the DDGs would be completed at an estimated cost of some $302 million or 6.8% in excess of the Target Cost Estimate'.

Again, according to the ANAO, the project has experienced a range of difficulties including 'immaturity in detailed design documentation and block construction problems leading to extensive, time consuming and costly re-work', and 'substantially lower than anticipated construction productivity'. On the latter issue, by November 2013 it was costing $1.60 to produce work originally estimated to cost $1.00.

It would be a mistake to blame the problems experienced with the 'immaturity in detailed design documentation' solely on Navantia. In the period leading up to selection of the design and final government approval, the three members of the alliance had every opportunity to assess the suitability of Navantia as a supplier of design documents and to test their ability to make use of those documents.

Similarly for industry and Defence's claim that productivity is low because of having to recommence shipbuilding after an extended hiatus. In the final analysis, the delays to the project reflect a failure by the Alliance to understand what could be achieved with the workforce it knew would be available. Nonetheless, problems with the AWD continue to be depicted as the result of externalities beyond the control of Defence or Industry.

With the project 'behind the curve' in meeting the TCE, participants stand to forego at least some of their anticipated profit and corporate overhead. That doesn't mean that the project will necessarily go over budget relative to the 2007 government approval (DMO presumably holds substantial contingency funds in reserve), but it does mean that the commercial participants stand to lose all or part of their fee if productivity doesn't improve sufficiently.

In December 2013 government announced an external review of the AWD program.

With 33 months before the first vessel is delivered, there's a lot that could happen. The construction of modules and their consolidation are but initial steps along the road of fitting out the vessels with their propulsion, communications, navigation and weapons systems. On the basis of past experience, it would be fair to say that the hard parts are yet to come. Some appreciation of the complexity of the project can be gained from the workforce breakdown in Figure 7.13.

Of the 135 worker-centuries of toil involved in the construction of the three AWD (pre 2012-delays), fewer than half actually entail tradespersons fabricating the vessels. Despite being a proven off-the-shelf design, there are close to six centuries of design work needed. The

remaining three and half millennia of effort is divided between 32 worker-centuries of white-collar engineering and administration and 34 worker-centuries for the development and installation of the combat system and its peripheral components. The former is hard to judge in the absence of a benchmark; certainly the project demands the close coordination of compatible inputs from a great many different suppliers—not to mention the administrative burden of the alliance itself.

But what's certainly surprising, at least initially, is the very large workload associated with the combat system and components. However, the explanation is simple: despite much talk of the F-100 being an off-the-shelf option, the combat system was always intended (even prior to the choice of platform) to be 'Australianised' through the integration of a number of new peripheral systems with the core Aegis combat system. In the past, systems integration has been the bane of many a defence project. There's no doubt that there are risks intrinsic to the systems integration around the combat system akin to those that have caused serious problems in defence projects previously. For the moment at least, things are reportedly 'progressing well'. And it's encouraging that when other countries have adapted the Aegis system to their specific requirements the problems have been manageable. We'll have to wait and see.

Finally, before leaving the AWD project, there's the long-term question of through-life support. Successive naval platforms have been delivered to the RAN without a coherent sustainment plan or contract in place. The Collins class is perhaps the most visible failure of this type, but other classes of vessel have suffered similarly. Regrettably, defence projects have sometimes sacrificed the purchasing of spares to accommodate cost pressures during acquisition. Let's hope that a plan emerges soon. (For the record, we said this last year, and the year before that.)

The ghost of submarines future—replacing the Collins

Just prior to the 2012 May budget, the government announced the next steps in the process of replacing the Collins class submarine. In broad terms, the goal was to achieve first pass approval in late 2013 or early 2014 and second pass approval in 2017. The options being considered were (verbatim):

- An existing submarine design available off-the-shelf, modified only to meet Australia's regulatory requirements.
- An existing off-the-shelf design modified to incorporate Australia's specific requirements, including in relation to combat systems and weapons.
- An evolved design that enhances the capabilities of existing off-the-shelf designs including the Collins Class.
- An entirely new developmental submarine.

Concurrent with the release of the 2013 Defence White Paper in May 2013, the government announced that it would:

'…suspend further investigation of the two Future Submarine options based on military-off-the-shelf designs in favour of focusing resources on progressing an 'evolved Collins' and new

design options that are likely to best meet Australia's future strategic and capability requirements'.

Two points are worth noting. First, the effective shortlisting means that efforts will now be directed towards the two most costly, risky and time-consuming options for Collins replacement. Second, the word 'suspend' is far from accidental. The previous government reserved the option of returning to the less costly and risky options at some point in the future.

Also in May 2013, the government identified the US AN/BYG-1 as the reference combat system for the development of the Future Submarine and announced the results of a study of the service life of the Collins:

'The study found there is no single technical issue that would fundamentally prevent the Collins Class submarines from achieving their indicative service life or a service life extension of one operating cycle for the fleet, which is currently around seven years, excluding docking periods'.

Given the extended time necessary to execute the two options now being concentrated on, the extension of the Collins life-of-type by an additional operating cycle is now a foregone conclusion. Fortunately, the favourable results of the last Coles review are encouraging that the Collins will render useful service in the years ahead.

A Defence-Industry Integrated Project Team (IPT) is developing a submarine design brief in preparation for a round of formal industry consultations. Interestingly, ASC's Deep Blue Tech initiative hasn't formed the core of the IPT, instead it has been absorbed into ASC's engineering division. A more extensive ASPI analysis of the submarine program will be available mid-year.

Shipbuilding and the 'valley of death'

The looming end to the AWD program has brought calls for additional orders to keep production going at Australian shipyards. In part the argument is about 'keeping jobs', which is a perfectly understandable position for trade unions to adopt. More generally, however, industry and its lobbyists are making the case for additional work in order to maintain continuity and its build productivity in the sector. Put simply, if we keep practising we'll eventually get it right.

In its purest form, the argument isn't just for more work in the short term, but for Australia to adopt a continuous production model—one for submarines and one for surface combatants. Under such as scheme, old vessels would be retired as new vessels are built.

If Australia had a fleet of 20 submarines and 20 surface combatants it would be an easy case to make. By building a vessel every eighteen months we'd be able to keep the construction program running forever assuming a 30-year life of type for the vessels. To do that with fewer vessels requires either the production interval to be extended (thereby adding to overhead costs per vessel) or to retire vessels more frequently (thereby accepting a reduced return on investment). One way or another, a sub-critical continuous build program will add additional costs.

On the other side of the coin, a continuous build program would allow skills to be maintained and productivity to grow through learning. There's no obviously correct answer; we build cars continuously in factories and we build bridges as unitary projects. For a given fleet size, it's a matter for detailed analysis as to whether a continuous build program will be more cost effective than period projects in the long term. While I'm sceptical that Australia has sufficient demand for either submarines or surface vessels to support a continuous build program, I'm firmly of the view that we should crunch the numbers to find out.

The plaintive cries to fill in the valley-of-death with work—any work—introduces the risk that the government will take precipitous action without the opportunity for analysis. The risk could manifest in any number of ill-advised ways. For example, it looked as though a fourth AWD was a real possibility for a while.

Another poor idea is to bring forward the retirement of the Anzac class frigates—an idea the previous government said it would consider. Last year's FSISP prepared by DMO even included modelling of an early frigate replacement 'based on the Air Warfare Destroyer hull and produced in a rolling build program' commencing in 2017.

According to the 2012 Defence Capability Plan, the Anzac class frigates aren't due to be replaced until the period 2027 to 2030. Commissioned into service between 1996 and 2006, the Anzac class are presently undergoing several upgrades, including Anti-Ship Missile Defence Phase 2A ($386 million), Anti-Ship Missile Defence Phase 2B ($676 million) and the just-commenced Electronic Support Systems Improvements ($260 million). The replacement for the Anzac is envisaged as an Anti-Submarine Warfare (ASW)-optimised frigate.

From an industrial perspective, and noting the desire to provide continuity in shipbuilding and skills retention after the end of the AWD program, there are two broad options for an acceleration of the Anzac replacement:

- Immediately commence work on acquiring a foreign design that can be put into production overlapping with the latter part of the AWD program.

- Evolve the AWD hull to be the basis of a new class of Australian-unique frigates and commence production overlapping with the latter part of the AWD program.

A degree of overlap is required in each case because the skills employed at the end of a shipbuilding program (combat system fit out, set-to-work and operational test and evaluation) are different to that needed at the start of a new construction program (platform design, combat system development and module construction). If the future frigate commences at the end of the AWD program, the only continuity will be in a subset of white collar jobs. For skills to be retained across the full range of trades and professions, substantial overlap is required.

Given the short time before the end of the AWD program, it's not credible that a new design can be chosen and put into production quickly enough to provide continuity. That leaves the adaptation of the AWD design to create a frigate. While it might, just might, be possible to achieve sufficient overlap by beginning to build modules for the new vessels concurrent with the design of what would be an Australian-unique frigate, the challenge would be to adapt

the AWD platform hull and propulsion system to meet the low noise demands of ASW. It's noteworthy that the United Kingdom explored the possibility of adapting its Type 45 Destroyer design for the ASW role and decided not to proceed.

Thus, if skills are to be retained through the early replacement of the Anzac class, it would require finding a way to rapidly adapt the AWD hull/propulsion design to meet the demands of ASW while simultaneously designing the ASW package for the vessels, including sensors, weapons and the combat system. The result would be an Australian-unique vessel designed and executed in double-quick time.

Setting aside the abundant risk in such a scheme, it would also require us to dispose of a perfectly good fleet of vessels that are only part way through their life, and are still being upgraded at a substantial cost. The proposition that this veritable mountain of additional cost and risk is worthwhile in exchange for continuity and skills retention in the naval shipbuilding sector is difficult to accept.

The only realistic option for carrying forward skills from the AWD program is to establish a project office for the Future Frigates over the next couple of years and get to work on project definition studies and other preliminary work. Although this would only allow a limited number of project and engineering positions to be carried forward, it would help put the Future Frigate project on a firm footing. Of course, it would do nothing to close the valley of death for the bulk of shipbuilding workers.

For a full and critical discussion of the 2013 FSISP see this chapter in last year's Budget Brief.

Chapter 8 – Capability planning and delivery

Even if the government makes good on its promise to boost defence spending to 2% of GDP, the feasibility of what's planned for the ADF will be far from assured. The unambiguous lesson since 2000 is that while planning for new capability is easy, delivering it can be very difficult. This Chapter examines the planning and delivery of ADF capability and presents a case study of the development of the LHD-enabled amphibious capability to show the many complexities attendant to bringing new capabilities into service.

Capability planning

Since 2000, the government's plans for developing the ADF have been set out in a series of public Defence Capability Plans (DCPs), which distil key information from their classified namesakes. Table 8.1 lists the public DCPs released since 2001. The public DCP is an important source of information for defence firms developing business plans. Note that in 2012 the DCP was augmented by a Defence Capability Guide (DCG), which reinstates decade-long coverage. For ease of reference, the combined public DCP-DCG package will be referred to as the DCP below.

Table 8.1: Public Defence Capability Plans 2001-2012

Year	Title	Coverage	Updates
2001	Defence Capability Plan 2001-1010	10 years	2002
2004	Defence Capability Plan 2004-1014	10 years	
2006	Defence Capability Plan 2006-1016	10 years	
2009	Defence Capability Plan 2009	4 years	2010 (x2)
2011	Defence Capability Plan 2011	4 years	2011 (x2)
2012	Defence Capability Plan 2012	4 years	
2012	Defence Capability Guide 2012	6 years	

No DCP was published following the 2013 Defence White Paper, and a new edition isn't anticipated until after the 2015 White Paper. Thus, when the next DCP is released in the second half of 2015 it will have been more than three years since the Australian Government had disclosed its plans for defence procurement.

Over the years, ASPI has tracked the approval of projects relative to the plans set out in successive DCPs. In the next section, the feasibility and delivery of the latest available DCP, July 2012, is examined in tandem with a discussion of the difficulties faced in planning and approving defence materiel.

Approval and commencement of projects

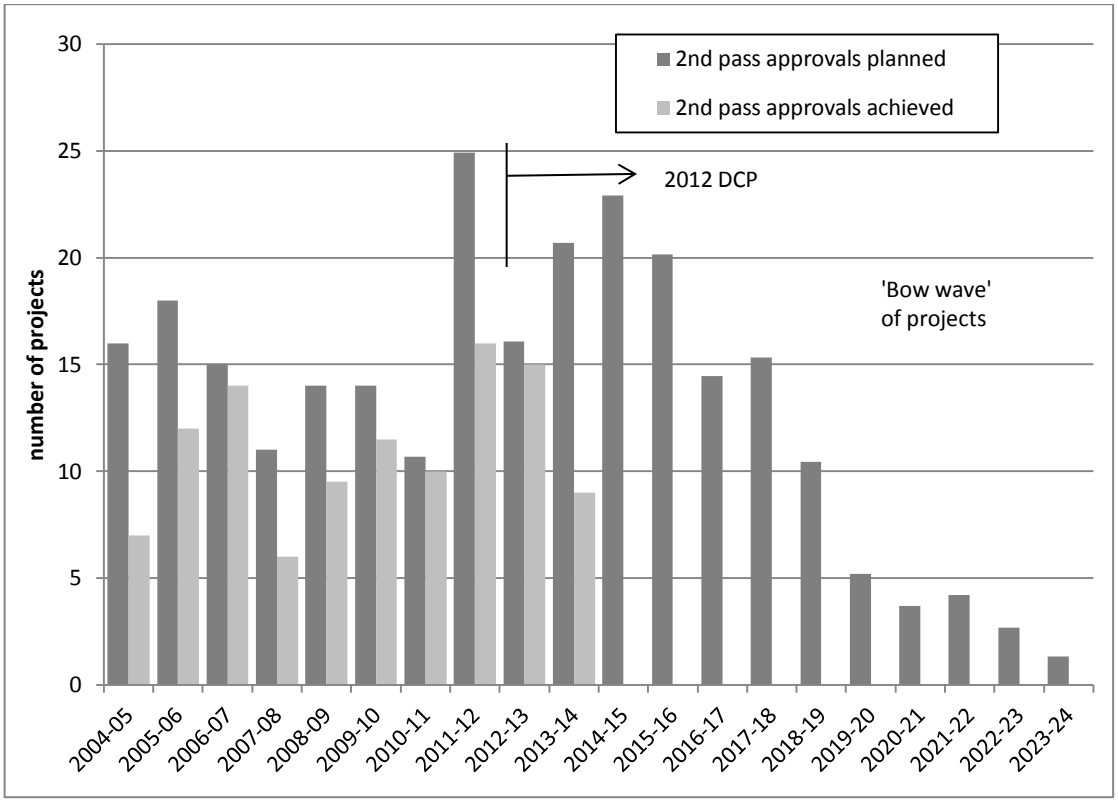
Before an item of major capital equipment can be purchased, the acquisition has to be approved by the National Security Committee of Cabinet or, for projects valued less than $100 million, by the ministers for Defence and Finance. Under the arrangements introduced following the 2003 Kinnaird Defence Procurement Review, each major project is considered twice. Initial approval (known as first pass) allows a project to begin planning in earnest,

including collecting information on potential options. Sometime later, final approval (second pass) is sought to allow a project to proceed to contract with a supplier.

Tracking the achievement of first and second pass approval of major capital investment projects isn't straightforward. The public DCP no longer includes specific years for the planned approval of projects. Instead, there are now only multi-year brackets, which obscure what's going on with individual projects. However, with a bit of work, it's possible to generate a clearer picture of plans for the overall program. This can be done by tabulating all the multi-year windows for the individual projects, and in the absence of more precise data, assigning an equal probability of an approval in each year of the window.

For example, if a project has a window of 2011-12 to 2012-13, it's assigned a 50% chance that it will be approved in each of the years. Weighting the probabilities for all the projects available in the 2012 revision of the DCP in this way yields the project approval patterns in Figures 8.1 and 8.2. For comparison, previously planned and achieved approvals for the period 2004-05 to 2011-12 have been included. Because they aren't listed in the DCP, we've excluded the approval of classified projects. Where project have been split into additional phases at the time of approval, these have been added to the number of approvals planned (that way we can count all of the projects approved without double counting split projects).

Figure 8.1: Projects planned for second pass approval



Source: Past and current DCP, PBS and Annual Reports.

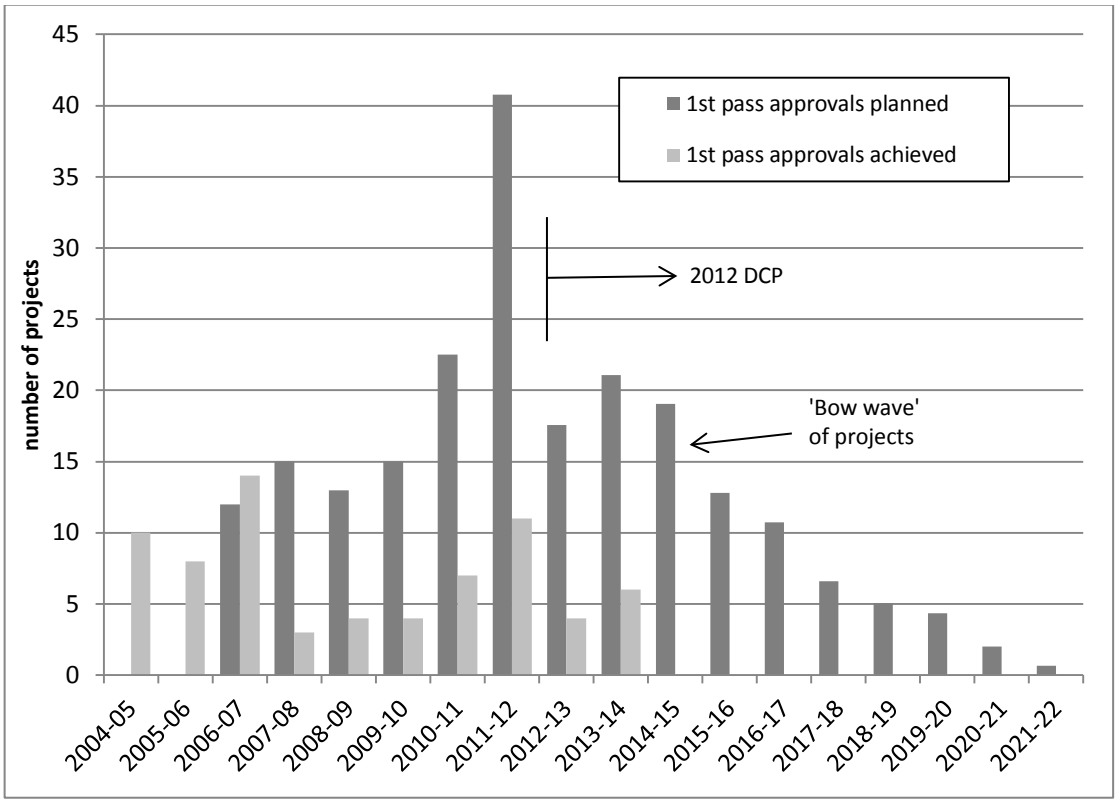
Several points stand out from Figures 3.13 and 3.14 in Chapter 3:

- The pace of second pass approvals improved substantially in 2011-12 and 2012-13, although some of the approvals in 2011-12 were 'one-off' non-DCP projects such as

long-lead items for the Growler upgrade and another C-17 purchased as the financial year came to a close.

- First pass approvals—the lead indicator of future work—are still very badly behind schedule, despite some improvement in 2011-12.
- The failure to approve projects has created a 'bow wave' of approvals over the next 3-5 years that isn't apparent in the charts because the planned approvals are taken from the 2012 DCP.
- As expected, because second pass is contingent on first pass, the peak of planned second pass approvals occurs a year or two after that for first pass.

Figure 8.2: Projects planned for first pass approval



Source: Past and current DCP, PBS and Annual Reports.

2013-14 was a reasonable year for second pass approvals but disappointing for first pass. As of mid-May, the government had achieved 6 first pass approvals and 9 second pass approvals this financial year. It's possible that further approvals will occur prior to 30 June.

Perhaps it's unfair to compare the approval of projects with a plan that's almost 2 years old. Since 2012, the PBS has included a list of projects anticipated for approval in the forthcoming year. On this basis, the difference between plans and actuals is a little less dramatic as shown in Table 8.2. Nonetheless, it should be remembered that the PBS only reflects near-term anticipated activities while the DCP reflects the longer-term plan for the development of the ADF—it's the latter that matters.

Despite the reforms to the Capability Development Group, an examination of historical patterns of project approval warrants caution about how much can be achieved in the near term. As Figure 8.3 shows, high approval rates commensurate to those planned recently

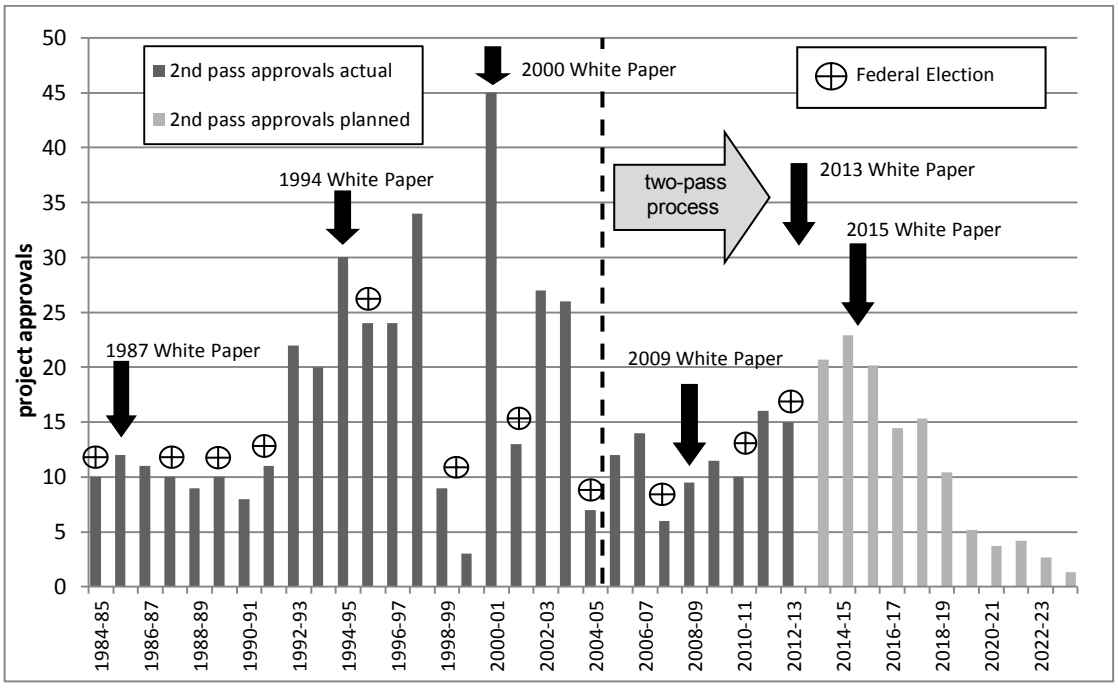
have been achieved in the past, but not since the introduction of the more demanding two-pass process in 2004.

Table 8.2: Near-term planned and actual project approvals

Year	1st Pass		2nd Pass	
	planned	actual	planned	actual
2012-13	6	4	19	15
2013-14	12	6	17	9
2014-15	5		12	

Source: PBS and DAR. Note that additional approvals may occur in 2013-14. 2013-14 actual numbers are as at 13 May 2014. Excludes classified projects to ensure a consistent comparison because they aren't foreshadowed for approval.

Figure 8.3: Planned approvals (second pass); 1984 to 2022



Source: DAR and 2012 DCP/DCG, excludes classified projects.

Recent performance in achieving planned project approvals needs to be seen in the context of resource instability and other countervailing factors over the past several years. An election (and attendant caretaker period) plus a White Paper combined to disrupt approvals in 2013. More importantly, the successive cuts to defence funding between 2009 and 2012 demanded repeated revisions to the DCP. In the past three, years Defence has had to delay over 120 unapproved projects and reduce planned funding in 44 projects.

Understandably, with resources reduced, priority was given to projects that had already received first pass approval and were subject to industry solicitation. As a result, first pass approvals suffered the most.

Hopefully we're entering a period of greater funding stability. However, with a White Paper under development (which historically reduces the number of approvals) there may be a reduced throughput of approvals over the next 12 months.

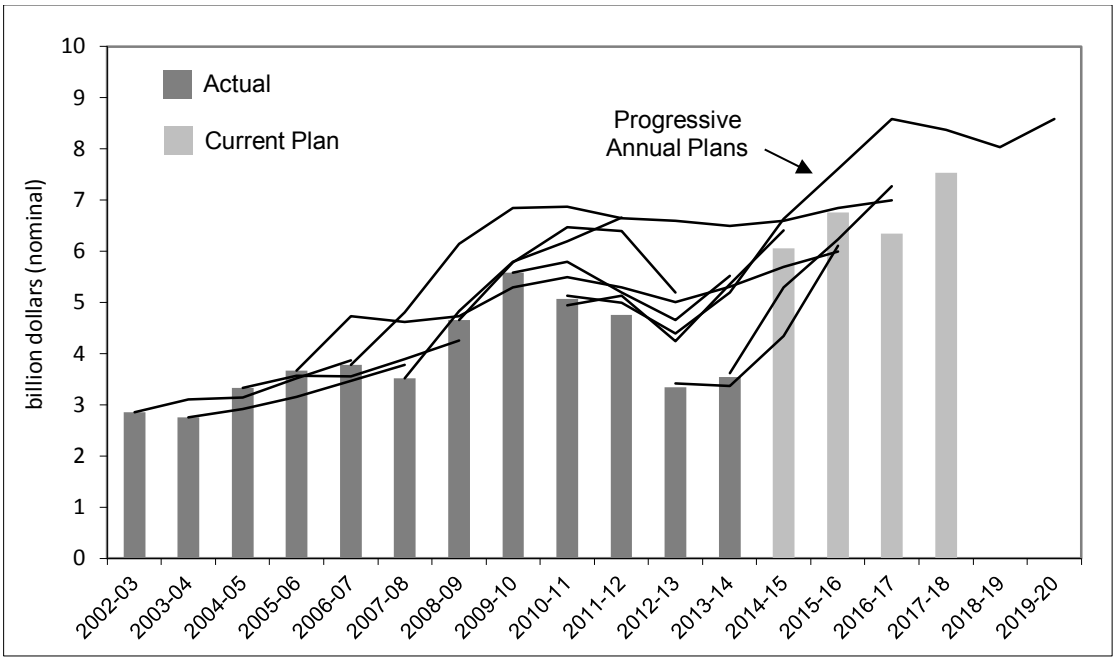
Performance in delivering capital equipment

The critical path to expanding and modernising the ADF goes through the physical acquisition of major capital equipment. In this section we examine recent and historical trends in the Approved Major Capital Investment Program. For more than a decade, Defence struggled to deliver on its plans for re-equipping the ADF. Between 2000 and 2012, around $6.2 billion of investment was deferred into the future. In the first part of this period, it was because DMO was unable to spend the money. The typical pattern was DMO would hand money back at the end of a year, and then have funding for future years taken away with the promise that it would be returned at some point in the more distant future. More recently, DMO has been able to spend the money it has been given, but delays have been imposed by the government to meet broader fiscal imperatives.

But as seen in 2011 and 2012, there's no guarantee that deferred funds will be available in the future. Up to the constraint placed by contractual obligations, it's entirely at the discretion of the government how much it funds investment from year to year irrespective of any undertakings made in prior years, especially if those undertakings are made by a different government.

In each budget the government sets out how much it intends to spend on major capital investment, usually for the next four years but sometimes over the next 10 years. Successive plans and actual results are plotted in Figure 8.4.

Figure 8.4: Major Capital Investment – plans and actual results



Source: 2013-14 PAES, 2014-15 PBS and speeches by Defence officials. Planned figures include approved and unapproved projects. Historical figures pre 2013-14 provided by DMO.

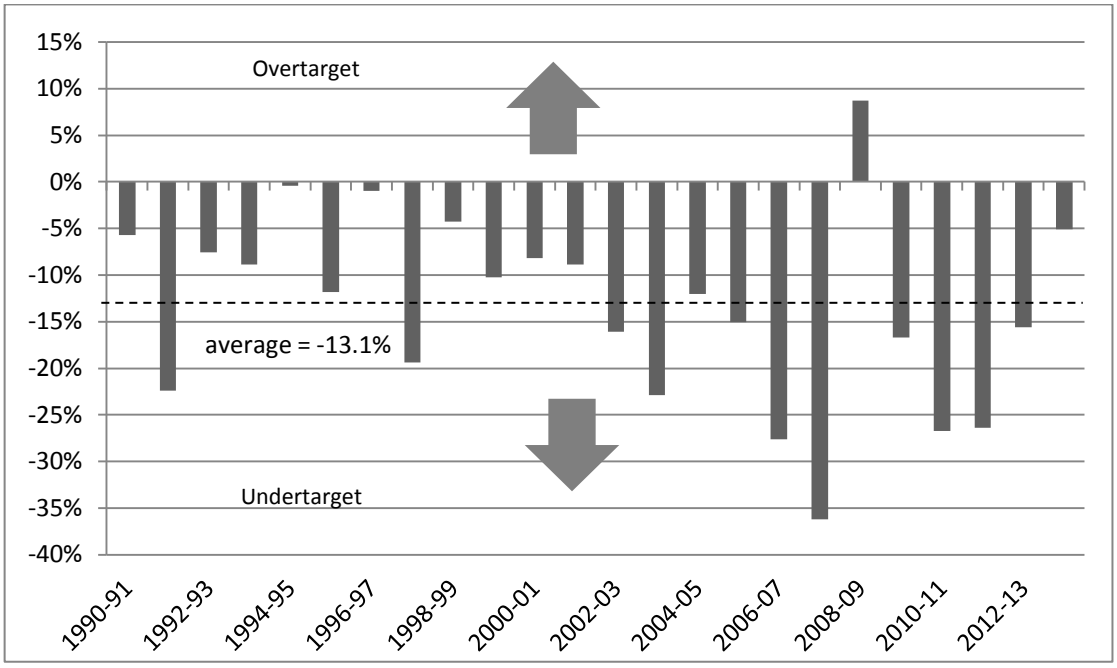
Even when projects are approved and funding is available, acquisitions tend to progress more slowly than anticipated. Usually this is managed through the mechanism of

'overprogramming' whereby more spending is planned than available money. The systematic slippage in projects then, more or less, brings things into balance at the end of the year (with a little management intervention as necessary). Sometimes things don't go to plan and money has to be handed back, as occurred in the early to mid-2000s.

To track the evolving performance of delivering projects on schedule, we've collected data on the planned and actual expenditure on the top 20 or 30 projects reported each year. Within these projects, figures aren't overprogrammed and therefore reflect a project's anticipated and actual in-year performance. Because foreign exchange rates sometimes change mid-year, these need to be taken into account. Unfortunately, the impact is hard to assess because the projects for which information is available only represent a sub-set of the total program, and the impact of foreign exchange is only available over the entire program. But because foreign exchange has been relatively small (apart from in 2009-10), a reasonable comparison is possible. The results are shown in Figure 8.5. Note that the results from 1993-94 to 1995-96 only take into account 'significant' changes. As a result, the figures for these years probably slightly underestimate the extent of underperformance.

A couple of points are worth making. First, given the consistent tendency of projects to underperform, the current and longstanding application of overprogramming is entirely appropriate. Second, if projects are being more carefully developed prior to approval, as is claimed, an improvement should be expected as newer projects replace the old. Similarly, the development of a more commercially adept and professional acquisition workforce should be reflected in improved in-year performance of projects old and new. Although this isn't apparent from the Top-30 dataset presented here, this may reflect the limitations of using publicly available data and employing financial results as a proxy for schedule. Encouragingly, the ANAO have analysed the performance of more recently approved projects and reported a systematic improvement.

Figure 8.5: Per cent under- and over-spent on top 20/30 capital equipment projects



Source: Defence Budget Papers and Annual Reports. Only the revised figure is available for 2012-13

Responsibility for the performance of the approved major capital investment program is shared between DMO and Industry. Each side is naturally eager to see the other take responsibility for problems. This year, we looked carefully at the causes of slippage in the top 30 projects as given in the 2013-14 PAES. The story is somewhat more complex than 'them' or 'us'. Of the payment delays reported at that time, fully $38 million were 'good news'; including cost reductions and early payments in the previous reporting period. Of the roughly $101 million in 'bad news', our assessment was that industry was primarily responsible for the delays (remembering that this assessment is based on DMO reporting). Our best estimate of the situation appears in Table 8.3.

Table 8.3: ASPI assessment of 'responsibility' for slippage 2013-14

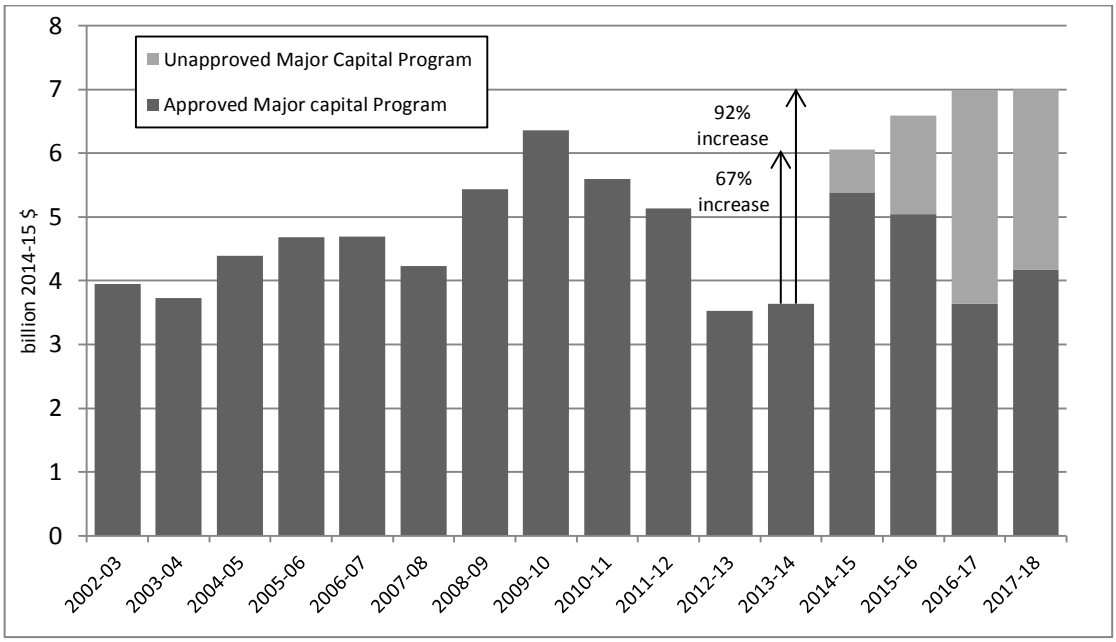
	Commonwealth	Suppliers	Unallocated
Positive	$6 million	$32 million	$74 million
Negative	$6 million	$95 million	

Source: ASPI assessment of information in the 2013-14 PAES

The feasibility of current plans

Based on the experience of the 2000s, when investment had to be deferred on a number of occasions, we can only be confident of ramping up investment by an average of around 5% a year in real terms. Beyond that rate, there's a demonstrated risk of industry and/or DMO being unable to marshal capacity quickly enough. As Figure 8.6 shows, current plans entail a very rapid increase in Major Capital Investment well beyond what has been achieved in the past. Fortunately, there's a series of recent large off-the-shelf purchases that will help mitigate the risk of the rapid increases. These include the Growler airborne electronic attack aircraft ($797 million), P-8 maritime patrol aircraft ($324 million), Caribou replacement ($314 million), Seahawk helicopter replacement ($505 million), and the Joint Strike Fighter ($238 million). The figures in brackets represent the planned 2014-15 spend. All of these projects will contribute strongly to investment spending over the next several years.

Figure 8.6: Past and planned Major Capital Investment – corrected for inflation



Source: Historical figures pre 2013-14 provided by DMO, 2013-14 PAES, 2014-15 PBS

Notwithstanding the recent large off-the-shelf purchases, the balance of risk over the next several years will be towards under- rather than over-spending on major capital investment. It wouldn't be surprising if money was handed back unspent in the years ahead. Given the systemic underfunding of the past several years, this is an unavoidable challenge to be faced if momentum is to be regained in re-equipping the ADF.

The planned rapid increase in capital investment begs the question of staffing. Calls for drastic cuts to the DMO workforce may play well in the media, but the reality is that the planning and oversight of complex acquisition projects requires large numbers of experienced people. As explained in Chapter 3, the increase shown in Figure 8.6 is likely to be only the start of an even more massive and sustained investment hump in the years that follow. Unless Defence's capability planners (including but not limited to CDG) and DMO's acquisition workforce are available in adequate numbers, failure is assured.

ADF amphibious capability: issues of interest and concern

Tom Muir

Executive Summary

The planned introduction into RAN service of two new 27,000+ tonne amphibious assault vessels (Landing Helicopter Dock (LHD) ships), and the 2009 Defence White Paper's maritime strategy for the ADF have brought new focus on this country's slowly improving amphibious capabilities, their purpose, and issues regarding their employment in an Australian context. Joint operations with coalition partners are another potential application of this capability.

But until the two new Canberra class LHDs and their watercraft are brought into service, the four remaining Landing Craft Heavy (LCH) are replaced, and a new strategic sealift capability introduced to replace the ageing, role-limited HMAS Tobruk, this country will be hard pressed to meet its amphibious capability aspirations.

In the meantime, to turn this new hardware into capability, the ADF has to develop new operational concepts, new doctrine, tactics and procedures, and training. And the Army has to adapt to a maritime strategy beyond that of a token force within Plan Beersheba.

Background

The need for an ADF amphibious capability had been growing during the 1980s and led to a proposal to replace HMAS Tobruk, a Landing Ship Heavy (LSH), with a new dual role training and helicopter support ship. But the proposal to construct one ship at a cost of $500m was cancelled as too expensive, with the option of acquiring a second-hand ship from other navies remaining a possibility.

Two of the USN's Newport Class Landing Ship Tank (LST) were judged the most appropriate and cost-effective capability for the ADF for sea training and helicopter support. In RAN service they were to be modified to each carry four helicopters, 450 troops and their vehicles and equipment, and were re-designated Landing Platform Amphibious (LPA).

Following limited inspections by an RAN technical team, they were purchased in August 1994 and, newly commissioned as HMAS Manoora and HMAS Kanimbla, they arrived in Australia in September and November 1994 respectively. But detailed hull inspections of the

two ships soon revealed extensive corrosion, necessitating extensive repairs before the vessels actually underwent their extensive modifications.

Other costly bungles included the awarding of a contract by the DMO for the construction of landing craft for the LPAs which turned out to be the wrong size—they were too big for mounting on the ship, and couldn't be used! Thus began a saga of mounting costs and recrimination that showed RAN maintenance (and accountability) in a poor light. Withdrawn from service in 2011 and decommissioned in 2012, the sale of the two LPAs for scrap was announced on 24 June 2013.

Today Australia's core amphibious capability rests with the Heavy Landing Ship HMAS Tobruk, (which was due to be retired in 2012 but is currently 'soldiering on' until the first of the LHDs is commissioned this year), the Landing Ship Dock HMAS Choules, the ADV Ocean Shield, and four of the eight Balikpapan Class LCHs that are yet to be decommissioned, but are due for retirement later in 2014.

The LCHs have been used continuously since the early 1970s and have provided outstanding service, but they are relatively slow and vulnerable to adverse weather. The new class of landing craft will provide intra-theatre lift to augment the LHDs and other future strategic sealift vessels. The new watercraft will have improved seakeeping characteristics and faster transit speeds than the LCHs they're replacing.

Other components of the future amphibious capability include 12 new LCM-1E high speed landing craft that will operate in conjunction with the two LHDs. These craft are purpose-built for the LHD and are intended to deliver troops and equipment onshore where there are no fixed port facilities.

ADAS Operational Concepts

Perhaps the best way to gain an appreciation of the broad Amphibious Deployment and Sustainment (ADAS) system, now being developed under Joint Project (JP) 2048's program of Amphibious and Maritime Support, is to revisit the original operational concepts document (OCD) and other related sources, such as Australia's Amphibious Concept (AAC).

The AAC establishes the ADF approach to contemporary and future expeditionary amphibious operations. The concept not only describes this country's strategic environment and guidance but also the development of ADF capabilities, reflecting current and future US / UK / NATO Doctrine and practices. It also reflects joint and single service forward-looking operational concepts.

At the highest level, the Defence White Paper 2009 (DWP 2009) reinforced the need for an amphibious capability when it stated that the principal task for the ADF was to deter and defeat armed attacks on Australia by conducting independent military operations without relying on the combat or combat support forces of other countries. This was seen to entail a fundamentally maritime strategy, requiring forces that could operate independently with decisive effect throughout the northern maritime and littoral approaches to Australia and the ADF's primary operational environment (POE). That strategy would be a proactive one, in which the ADF would aim to control the dynamics of a conflict, principally by way of sea control and air superiority, and also by defeating hostile forces in their bases, in staging areas, or in transit.

In the ADF's Future Maritime Operating Concept, the section on Future Maritime Manoeuvre considers the ambitions of the joint land and air forces for complex and expeditionary warfare and integrates them with the maritime elements that enable these aspirations. It notes that:

Amphibious warfare is the most complex proposition for future ADF combat power development to 2025. Preparing the battlespace by establishing local sea control, deploying joint combat elements ashore, supporting them and then extracting them to manoeuvre or at the cessation of operations will require at least two significant task forces; one amphibious task force and one strike force.

The amphibious mission of deploying a brigade size force will occupy the vast majority of Australia's maritime combat power, even if the adversary is only capable of small-scale denial operations.

DWP 2009 identified the requirement for amphibious and sealift ships, and expeditionary combat support assets to provide the ADF with the ability to project and sustain military power throughout Australia's primary operational environment—and on occasions beyond.

JP 2048 is now a multi-phased program of projects that will provide the ADF with important elements of an amphibious warfare capability that will integrate within the ADAS system. The rationale for a national amphibious capability was largely reiterated in the subsequent Defence White Paper 2013 (DWP 2013).

Peter Dean[1] who has written extensively on amphibious issues, has pointed out that the emphasis on the amphibious capability isn't without its problems.

As the 2013 White Paper noted, the challenges for training and institutional culture involved in developing the capability to conduct amphibious operations will be significant. This is reflected in the difficulties the ADF has faced in developing clear strategic guidance for its use, the slow progress of amphibious concepts and a lack of integration between some of the amphibious plans and the capability projects.

Of major concern is the erosion of the ADF's littoral amphibious capabilities, especially the retirement of the Landing Craft Heavy, and the delays in implementing and funding replacement programs for these and other brown water amphibious capabilities as the LHD's come online. But these are not insurmountable problems.

C4I capability

While the original concept of the ADAS capability wasn't aimed at any specific capability solution, a key assumption was that it would eventually be delivered via two large amphibious vessels with supporting aircraft and watercraft, together with follow-on support by strategic sealift. And the ADAS system requires a very significant communications fit to support the extensive range of joint and single service C4I functions. Interoperability, compatibility and a degree of commonality will all be needed to contribute to efficient operational command and control.

The central concept of the ADAS C4 System lies in Project SEA 1442's upgrade and modernisation of RAN maritime communications systems enabling network centric

connectivity between major surface vessels in a Task Group. Internal LANs will need to be linked to external communications systems for real-time data transfer to ships management and administration systems.

Ships involved in amphibious operations must be capable of communicating with a raft of organisations such as HQADF and HQJOC, the landing force, ADF aircraft, other RAN and Allied ships and government agencies. According to the type and level of operation, data links may need to be established to HF networks, and the various ADF command support systems down to their subordinate elements.

Amphibious support ships will need to receive high bandwidth data from remote sensors (such as AEW&C, AP3C, P-8A/MUAS) and from cooperative engagement systems and other sources contributing to the situational awareness common operating picture.

RAN Fleet C4I systems

So how closely does equipment on order, or recently introduced, meet the capability proposals of the broader ADAS system? 12 major fleet units, including HMAS Success and HMAS Choules, are currently operational with the Sea 1442 Phase 3 Maritime Tactical Wide Area Network (MTWAN) and the upgraded Message Handling System. Installation in remaining ships will be completed as they become available. The MTWAN provides packet based switching for all security levels within a ship, enabling applications on those networks to access line-of-sight and beyond line-of-sight communications bearers (such as MILSATCOM, INMARSAT, UHF, and so on). By interfacing existing shipboard LANs with existing bearers over an IP based packet switched infrastructure, this capability provides much improved access to video, chat, web browsing, email and databases, as per the OCD.

Phase 4 will see an upgraded radio system to support wideband network communications, communications management and switching, secure voice and tactical intercom, and meshed high data rate line-of-sight radio communications.

The two Canberra-class LHDs will have extensive ICT infrastructure to support the ADF's command support systems and to provide C2/C3 capability for the embarked force. They will be equipped with an integrated communications system, internal and external, including the Message Handling Systems, Link 11 and 16, and satellite links.

The LHD's sensor suite comprises Sea Giraffe 3D air search radar, helicopter control and surface radar, and navigation radar. Other systems include Sagem Infrared Search and Track (IRST) System, and Rafael Gun and Electro-Optical Sight (EOS) system. This suite is in close alignment with that sought in the OCD.

Cybersecurity

While contributing significantly to task group capabilities, the extensive communications systems described bring with them significant liabilities in terms of their protection from the various forms of cyber or electronic warfare. The Australian Signals Directorate (ASD) is responsible for safeguarding Australia's government information networks and collecting foreign electronic and digital intelligence. While Defence doesn't provide information as to how it manages cybersecurity issues, it's anticipated that measures introduced to protect the ADF's range of vulnerable electronic systems—including wireless systems, sensors,

radars, electronic surveillance systems, emitters—is, or will be, handled internally under advice/approval of the ASD.

The DWP 2013 notes that the potential impact of malicious cyber activity has grown with Defence's increasing reliance on networked operations through net-centric enablers like the MTWAN. Reducing Defence's vulnerability to cyberattacks or intrusions in a crisis or conflict, including protection of deployed networks and information systems, will remain a high priority.

DWP 2013 also acknowledges that an adversary could use a cyberattack against Australia to deter, delay or prevent Australia's response, including the ADF's deployment of forces. This would probably include the targeting of information systems, networks and broader support infrastructure perceived to be integral to the ADF's decision-making and warfighting capabilities. Finally it says Defence capability would be seriously undermined by compromised sensitive information on command and control, operational planning, platform design or weapon system performance.

Amphibious operations involving a variety of networked air and surface platforms, such as troop carrying LCMs equipped with battle management and command support systems, troop carrying helicopters with their own communication systems, weapons systems, navigational systems and so on would all be vulnerable to portable high-powered RF jammers at the beachhead.

Embarked force communications

Under the Project Land 75/125 Battle Group and Below C3 (BGC3) program, embarked land forces, from battle group to company ready element levels, will be fully networked with command support and battle management systems, which would include mounted (including in LCM-1Es) and dismounted systems linked back to a command post in whatever Joint Operations Room arrangements determined for the Commander Amphibious Forces and the Commander Land Forces. From there communications reach back to HQ Joint Operations Command's significantly upgraded ICT infrastructure, and to 2RAR Bde HQ. As noted above, there are serious issues here with their vulnerability to cyberattack.

And thanks to JP2072 Battlefield Communication Systems (Land), embarked forces will be equipped with advanced combat radio systems, tactical data radio systems such as EPLRS Microlites, and tactical HF and satellite radios. Some of these systems will serve as bearers for the BMS network, underpinned by new network management and support systems. In addition to multiband handheld radios and their in-vehicle adaptors, HF manpack radios will also connect soldiers to the BMS and serve as hubs for other soldier-carried C4 devices.

For wider conflicts perhaps, and where Joint Terminal Attack Controller (JTAC) or Special Operations Task Group (SOTG) elements are included, radios will include models with wideband architecture such as AN/PRC-117G used to support network-enabled missions such as close-air support, precision fires (AFATDS) and MEDEVAC operations. On current deployment however, battle groups (or smaller) are provided high bandwidth for essential operational services (e.g. SOTG with AN/PRC-117F).

Amphibious force structure

The Army's 2RAR forms the core of the amphibious force and its proposed Amphibious Ready Group (ARG) construct, which comprises a medium weight Battle Group of some 2056 personnel and associated stores, consisting of infantry, armour, artillery, engineers and other vehicles and is supported by armed reconnaissance helicopters (ARH) and medium lift helicopters. An ARG is expected to be capable of conducting coordinated air and surface ship to objective manoeuvre (STOM) assaults from 30 nautical miles over the horizon (OTH).

Short notice amphibious capability will be provided by an Amphibious Ready Element (ARE), based on an infantry company with protected mobility, indirect fire support and ISTAR assets. An ARE may include medium lift helicopters and should be capable of conducting coordinated air and surface STOM type actions, of up to four platoon/troop elements, from 30 nm OTH.

For doctrine, training, tactics and procedures, the ADF's amphibious force will draw heavily on its counterparts in the US Marine Corps (USMC) and the Royal Marines. The American counterparts of the ARGs and AREs are the USMC's Amphibious Ready Groups and their Marine Expeditionary Units (MEUs) respectively. The USMC's forward presence consists of multiple MEUs which spend at least six months training for a variety of amphibious operations before being deployed.

The Royal Marines provide the backbone of the UK's amphibious forces. The major operationally deployable element of the amphibious force is 3 Commando Brigade, headquartered in Plymouth. The Brigade has three Commando units, 40, 42 and 45 Commando Royal Marines and has its essential combat support and combat service support elements provided by the Army.

While 2RAR has some 10 Battle Groups and a Commando Regiment available for tasking, with only three amphibious ships currently available, there has been insufficient capacity to generate 10 amphibiously trained Battle Groups. Faced with a number of options, Army has yet to decide on its final ARG construct. It seems likely that it will focus on providing one 'on-line' Battle Group for the conduct of amphibious operations, at the same certification levels as those of its coalition partners, while ensuring the remainder of the Army is at least exposed to sealift and follow-on operations.

Yet to be determined is the role of the 2nd Commando Regiment and the requirement for it to also be incorporated into the landing force. Similar to the MEU (Special Operations Capable) approach of the USMC, or the Bde Recce Force of the Royal Marines, it seems likely that a Commando Company would be regularly rotated with the landing force.

Amphibious training

Certification for deployment in the ADF is a stated requirement of Commander Joint Operations, and each service has a requirement to demonstrate the certification of individuals and force elements deploying on operations. HQJOC is responsible for the operational command of all assigned operations and thus will take a significant role in the development and execution of joint, combined and interagency training activities as part of an on-going program to ensure that assigned forces are capable of executing major, high-scale war fighting activities in accordance with government policy.

To achieve the delivery of an expeditionary amphibious capability as per the AAC, it's intended to use existing resources more efficiently, blending what has previously been seen as single service training events into a coherent joint and combined interagency training program. Assigned forces for exercises will be expected to train as they'll fight, as a Joint and Combined or Interagency force at all times, not just during one major exercise every few years.

Between 2012 and 2017, a series of exercises will build upon the AAC and single service lines, developing into a joint force for final certification on Exercise Talisman Sabre 2017. Forces in training last year were assigned to HQJOC for the conduct of joint and combined training in a series of progressively more capable amphibious support exercises. The AAC provided the framework for these exercises, set within a Talisman Sabre war fighting scenario. Joint Doctrine guided the interaction of joint and combined forces and, where necessary, was modified and updated before the next biennial certification activity.

The Army has adopted an Amphibious Pre-deployment Training Program, similar in concept to the USMC's pre-deployment training. The Program is aligned with the Army Training Continuum and will commence when the Amphibious Infantry Battalion and enablers have met individual and collective training proficiencies within their respective core trades.

Elements of 2RAR have undergone extensive training in Australia focused on planning amphibious operations, expeditionary logistics and expeditionary communications. Training has been supported by USMC Mobile Training Teams and UK Royal Marine experts and 2RAR members benefited from the opportunity to observe USMC certification exercises overseas. Training for headquarters staff has included three weeks of planning and command post exercises with Navy staff for a number of amphibious tasks.

Most personnel have qualified in Helicopter Underwater Escape Training while a larger than normal number of soldiers have completed training to rappel from helicopters in order to secure landing sites or to conduct assaults in areas where there are no suitable landing sites. Watercraft training has also been a feature, with some of the rifle companies working with LCHs and LCMs. 2RAR's B Company and attachments worked from HMAS Choules through a series of exercises to raise them to a standard of readiness for short-notice amphibious contingencies.

The Army validated its pre-deployment training through the conduct of a trial certification exercise synchronised with Exercise Talisman Sabre 2013, supported by Navy with HMAS Choules.

Army Aviation and the Royal Australian Navy Fleet Air Arm are developing the rotary wing capability for the LHDs, which will see MRH90, ARH Tiger and CH-47F Chinook embarked in support of the Amphibious Task Group. Development of LHD Aviation capability will begin with First of Class flight trials for each aircraft type and will then undergo a graduated increase in aviation capability in line with the development of the ABG, culminating in a mixed fleet Rotary Wing Group operating from both LHDs.

HQJOC has decreed that training should at all times resemble the conditions of actual operations to the maximum extent possible, including the use of operational information networks, such as CENTRIX or equivalent systems.

The Joint and Combined Training Centre, (JCTC) will build on and strengthen existing MOUs with regional coalition partners, especially US PACOM, who will facilitate in the conduct of certification for HQJAAF and HQJOC.

The concept of STOM

The Australian Amphibious Capability has fully adopted the ship-to-objective-manoeuvre (STOM) concept introduced by the USMC and which replaces phasing landing forces ashore at beachheads, awaiting the arrival of reinforcements and equipment, before striking inland to the actual objective. However, as far as Defence is concerned, amphibious landings are and will be a part of normal amphibious operations—not amphibious assaults.

Serving Army officer Thomas Lonergan had this to say regarding STOM assaults in ASPI's Strategist blog on 7 November 2013:

No astute military force in the world promotes the types of amphibious assaults undertaken in World War II or the Korean War as a feasible tactic in contemporary conflict.

Not even the US Navy and US Marine Corps—undoubtedly the world's most powerful and capable amphibious force—believe in the utility of directly opposed amphibious landings. Twenty-first century amphibious manoeuvre, underpinned by concepts like Ship-To-Objective Manoeuvre and Sea Basing, are about avoiding direct engagement when lodging a force from the sea to the land objective.

According to the USMC's STOM concept paper, the old way of phasing landing forces ashore was dictated by necessity. Technologies then available to landing forces required the Navy to provide the means to move from ship to shore.

The STOM concept calls for the amphibious ready group (ARG) to remain over the horizon, defeating enemy attacks through manoeuvre allowed by the expanded seaward battlespace. Ships well out at sea generally have more warning time to avoid or defeat attacks, and are harder to target. In STOM, the manoeuvre force use both vertical assaults and surface assaults to move rapidly to inland objectives, requiring assault systems with the speed, range, precision navigation capabilities, protection, and firepower to launch from over the horizon into the littoral area.

Sustaining vertical assault forces and fast-moving surface assault forces far inland from a seabase presents a formidable challenge, complicated by the size of the assault force, the size of enemy defensive force, and the time/distance analysis of movement from the seabase to shore. Then there's the challenge of identifying a tailored logistic-support package that can be sent ashore in a responsive manner.

The USMC uses heavy air cushion vessels (LCACs) to provide most of the heavy lift to shore. An amphibious ready group will have six to eight unarmoured LCACs, which can lift up to 60 tons for transport at better than 40 knots and have a range of 300 nautical miles. In the face of opposition, armoured amphibious vehicles (AAVs) are used. Similarly, the Royal Marines employ air-cushion vehicles and tracked amphibious vehicles for these tasks.

In the event that the ADF was to mount an independent STOM operation (for example to dislodge insurgents from a town at the request of a friendly neighbour) the action would

likely be limited to an aerial assault, possibly without the need for watercraft, but still from over the horizon to ensure surprise. It is unlikely that the ADF would mount a major STOM amphibious operation, calling for both aerial and land assault, other than as part of an Allied force, in which case troop movements would likely be via partners' protected/armoured amphibians, rather than the LHD's own watercraft.

The LHD's LCM-1Es have the ability to be used OTH, being equipped with radar navigation, GPS, gyro needle/magnetic and HF, VHF and UHF communications equipment, they're more suited for use as ship/shore transports in benign humanitarian and other operations than to 30 nm OTH movements in contested waters.

Similarly, the replacements for the Balikpapan Class LCHs might be better suited to independent STOM operations involving amphibious landings rather than assaults. In these circumstances the ADF would more likely use both MRH90 and CH-47 helicopters for successive waves of assaults by AREs. STOM calls for rapid projection of combined arms teams ashore, so success in an air assault depends on the ADF's ability to land the largest force in the shortest time.

UK Marines insights

Royal Marines' BRIG Will Taylor[2], until recently Defence Advisor to the British High Commissioner, kindly provided the following insights into how an amphibious force might operate in a medium level assault based on UK practice:

Extensive Operational Analysis (OA) in the UK showed that the ideal assault force consists of a minimum of three rifle companies (each 100–120 personnel) in the first wave. An Australian amphibious force should be able to call on a total of 18 helicopter spots (departure points), comprising six from the two LHDs, two from the LSD (A), two from support vessels (AOR/AFSH) and one from FFG or FFH escorts.

A CH-47 uses 2 spots, has no folding head (and cannot be stowed in the LHD hangar). An MRH uses 1 spot and has manual blade fold and can be hangared. ARH uses one spot and has manual blade fold and can be hangared.

Thus it needs to be determined in which order to bring aircraft onto flight deck spots, spread them, load them and launch them to constitute a 'wave'. Some aircraft such as ARH could be loaded and armed and then moved to support shipping or escorts to preserve fuel while troop lift aircraft load and launch.

Likewise with troop lift a judgement would need to be made on how many CH-47s to embark (the Royal Marines routinely embark 2 x CH-47 in the LPH), and in which order to load and launch to maximise range. For example, load and launch the longer endurance CH-47s which then loiter while the MRH are spread and loaded. The radius of operation is restricted by the time spent loitering.

Limitations on surface movements depend on a combination of beach gradient, sea state, tide state, waves and surf, reefs, vehicle wading depth/waterproofing, and landing craft capability.

Logistics is another area likely to impose operating constraints. The UK and USMC operate a 'single fuel' policy, under which all equipment is run using aviation fuel. Aviation is the single largest demand on fuel ashore, and so a single supply chain geared to keeping helicopters in the air also keeps the vehicle fleet on the move. It seems that the ADF plans to run three fuel supply lines (aviation, diesel and CIVGAS).

ADAS self-defence capability

The ADAS major ship element (the LHDs) should be considered one of the nation's most valuable assets, not simply because of their capital acquisition cost but rather because of the number of sailors, soldiers and airmen involved. One of the key performance parameters of the proposed ADAS system will be the ability to embark, sustain and transport by sea an Amphibious Battle Group (ABG) of approximately 2,000 personnel and equipment for up to 45 days, and deliver the force in good physical condition.

Given the strategic value of the ADAS, it needs to be able to contribute to its own self-defence across a spectrum of threat scenarios (that were detailed in classified supplement to the OCD) to protect the cargo whether supported by other ADF elements or somewhat remote from them, although it's anticipated that RAAF E-7A Wedgetail airborne early warning aircraft would be used as an airborne tactical HQ providing control of the airspace where possible.

Amphibious forces operating in the immediate neighbourhood may face a range of threats that will have implications for the defensive measures that would have to be undertaken for a successful operation and which may restrict aspects of the operation. These threats may come from the land, sea or air. DSTO studies have indicated that the survival probability of an escorted mission-essential unit increases by 80% with specified level of self-defence, but engagement must be coordinated with escorts.

If unescorted, the weapons will need organic cueing from the task group's organic sensors and in any event this may be necessary in the littoral environment. According to the OCD, the ADAS system will need to be able to contribute to its own defence via a range of soft and hard kill measures appropriate to the final design. Thus, while the ADAS should be protected by escorts, proximity to land may adversely affect escorts' capabilities, increasing the possibility of anti-shipping missiles 'leaking' through. Thus the ADAS must have the ability to contribute to its own layered defence through a range of means including NCW-enabled hard kill and soft kill measures, possibly augmented by cooperative engagement links to escorting forces.

However given the sophistication and cost associated with combat systems to counter more advanced threats, it is expected that the ADAS elements would carry relatively modest short-range air and missile defence systems. A full suite of soft kill and supporting electronic warfare measures including electronic support and attack and off-board decoys could augment the hard kill options. The LHD's self-defence systems are understood to comprise four Rafael automated 25mm gun systems, Nulka and Nixie decoy systems, and possibly pintle-mounted RBS-70 short-range air defence systems. While these are a close match to those proposed in the OCD, without suitable armed escorts, the LHD and its supporting systems would be more suited to relatively benign operations within the POE than in hotly contested areas.

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1. Peter Dean, *Why an amphibious capability?* ASPI Strategist 7 November 2013, Peter Dean, Fellow, Strategic and Defence Studies Centre, ANU.

2. Brigadier W J Taylor, Personal communication re UK Marines amphibious operations. Brigadier W J Taylor OBE RM. Defence and Naval Adviser, British High Commission, Canberra, ACT 2600.

Chapter 9 – Australia's Foreign Aid

Australia's foreign aid was administered by the Australian Agency for International Development (AusAID), until that department was absorbed into the Department of Foreign Affairs and Trade (DFAT) in late 2013. As a result, new budgeting arrangements for Australia's Official Development Assistance (ODA) program were put in place in the 2014 Budget.

Unfortunately, the new arrangements make it difficult to compare this year's budget with those from previous years. To make matters worse, the long-standing *Ministerial Statement on International Development Assistance* ('Blue Book') has been discontinued. In what follows, we do our best to maintain a historical time-series where it's feasible. Further information on Australia's foreign aid program is available from the DFAT website.

Australia's approach to foreign aid

One of Prime Minister Abbott's first acts after being sworn-in on 18 September was to announce that, along with some other administrative changes, the agency known since 1995 as AusAID would be integrated back into DFAT. The aid organisation had been an 'autonomous agency' within the foreign affairs portfolio from 1973, and an even more independent 'executive agency' from 2010. Although the Coalition's pre-election foreign affairs policy had indicated it was unsatisfied with the strategic priorities and governance of Australia's aid program, and Coalition frontbenchers had signalled a shake-up was likely, few observers had expected such a quick or comprehensive re-amalgamation.

In announcing the change, the Prime Minister pointed to a need to more closely align the aid and diplomatic arms of Australia's international policy. Foreign Minister Bishop has made the better coordination of Australia's aid, trade and foreign policies and programs a centrepiece of her approach to helping promote regional peace and prosperity and our broader objectives. She believes reducing poverty and advancing Australia's interests aren't incompatible but overlap significantly—especially in our near neighbourhood. Bishop has commissioned a series of reviews, including on aid benchmarks, the role of the private sector in promoting growth and poverty-reduction, and some key bilateral relationships, in order to inform the development of a 'more responsive and flexible' aid policy to be released in coming months.

Signs of some of the major themes expected to be included in the new policy seem to be apparent in this year's aid budget. These include the further consolidation of our aid efforts in the 'Asia Pacific-Indian Ocean' region; more deliberate efforts to try to harness the private sector's potential contribution as an engine of development; a focus on more strategically-targeted but slightly reduced aid spending; efforts to enhance performance measurement, benchmarks and effectiveness; and the further prioritisation of drivers and enablers of economic growth (trade, infrastructure, health, education, and empowering women).

New budgeting arrangements

Following the absorption of AusAID into DFAT, Australia's aid program is funded through DFAT under Outcome 1:

> *The advancement of Australia's international strategic, security and economic interests including through bilateral, regional and multilateral engagement on Australian Government foreign, trade and international development policy priorities.*

Funding relevant to Australia's aid program is mentioned in several places in the DFAT PBS (see below Tables 9.1 – 9.3). According to the DFAT website, ODA will amount to $5,031.9 million in 2014-15. We're unable to find that figure within the DFAT PBS.

Table 9.1: Australia's ODA-related funding by DFAT program

Program	2013-14	2014-15	2015-16	2016-17	2017-18
1.6 ODA – PNG & Pacific	637,366	966,618	1,017,308	1,044,863	1,081,537
1.7 ODA – East Asia	698,217	1,047,521	1,091,148	1,117,698	1,144,967
1.8 ODA – East Asia AIPRD	23,936	17,636			
1.9 ODA – Africa, South and Central Asia, Middle East and Other	606,696	1,131,335	1,081,112	1,123,907	1,440,023
1.10 ODA – Emergency, Humanitarian and Refugee	182,606	338,636	349,680	361,875	373,843
1.11 ODA – Multilateral Replenishments	3,473,939	117,622	-	2,434,284	12,622
1.12 ODA – UN, Commonwealth and Other International Organisations	265,418	344,428	342,941	421,170	424,614
1.13 ODA – NGO, Volunteer and Community	76,278	203,864	208,710	213,679	218,770
ODA Program Support	254,860	249,505	247,878	262,525	271,595
Total	**6,219,316**	**4,417,165**	**4,338,777**	**6,980,001**	**4,967,971**

Source: 2014-15 DFAT PBS

Table 9.2: Administered International Development Assistance funding

Program	2013-14	2014-15	2015-16	2016-17	2017-18
International Development Assistance	2,100,773	3,686,467	3,746,451	3,860,533	4,257,651
Other - International Development Assistance	538,386	462,050	342,941	549,680	437,236
IDA/ADF grants	99,079			248,764	
Total	**6,219,316**	**4,417,165**	**4,338,777**	**6,980,001**	**4,967,971**

Source: 2014-15 DFAT PBS

Table 9.3: Cash for International Development Assistance

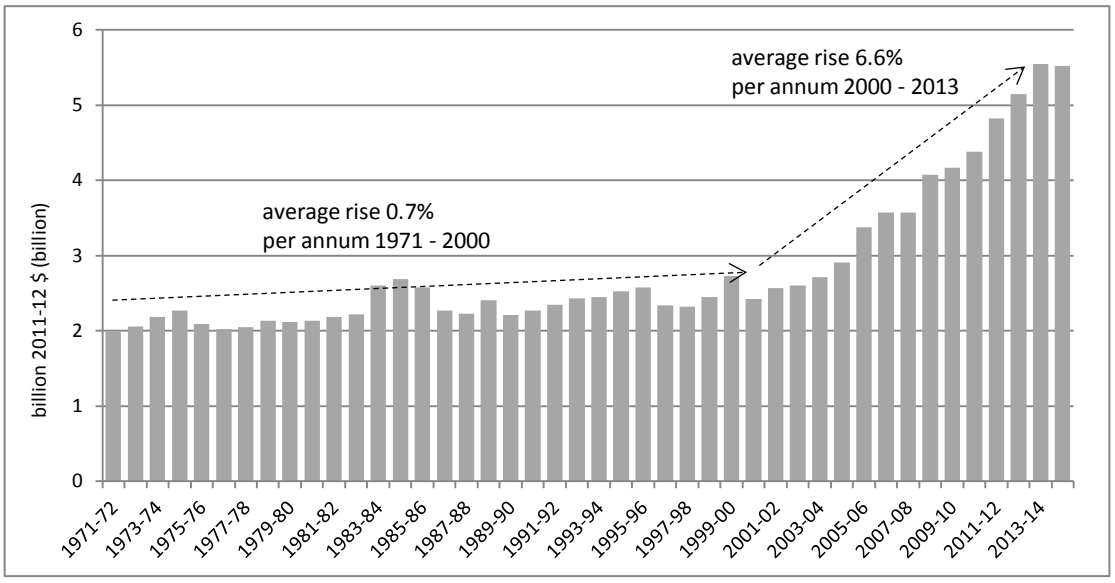
Program	2013-14	2014-15	2015-16	2016-17	2017-18
International Development Assistance	3,692,411	4,191,079	4,306,712	4,461,114	4,825,262

Source: 2014-15 DFAT PBS

How much does Australia spend on foreign aid?

In 2014-15 Australian foreign aid will amount to $5.0 billion. Funding is about the same as last year in nominal terms but represents around a 0.5% decrease using the non-farm GDP deflator. This year brings to an end a long period of robust growth in the aid budget. Between 2000-01 and 2013-14 foreign aid increased in real terms by an average of 6.6% per annum.

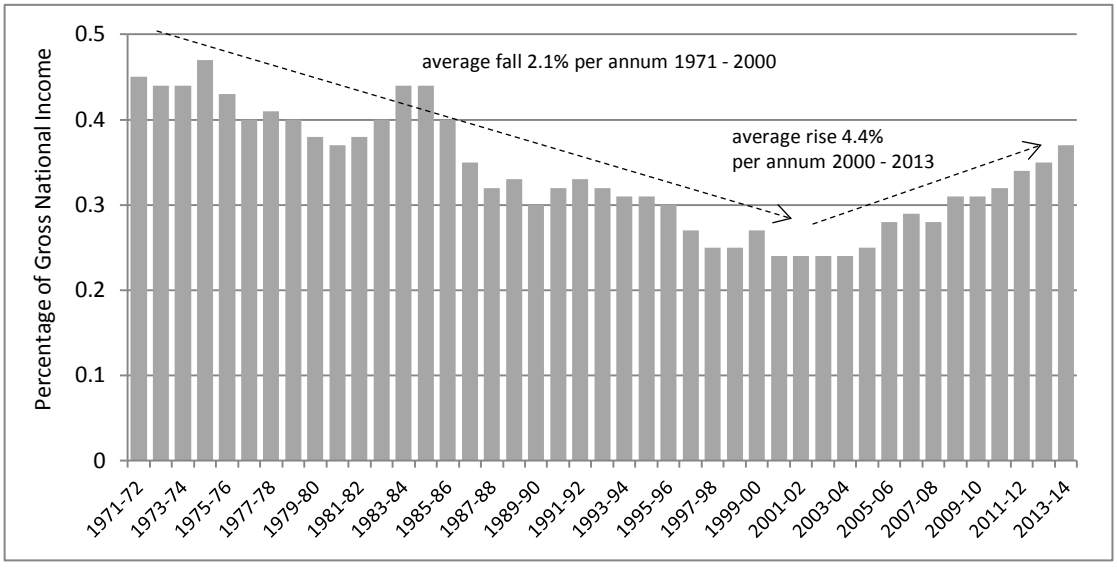
Figure 9.1: Australian spending on foreign aid 1971-72 to 2014-15



Source: 2013-14 Ministerial Statement on Australia's International Development Assistance Program, 2014-15 DFAT PBS.

In much the same way that defence spending is measured as a share of GDP, foreign aid spending is often measured as a share of Gross National Income (GNI) (see Figure 9.2). However, in contrast to previous years, the share of GNI hasn't been disclosed—and no estimate of GNI is to be found in the Budget Papers. In the future, we'll be able to update the GNI share using retrospective national accounts figures.

Figure 9.2: Australian foreign aid as a share of GNI 1971-72 to 2013-14



Source: 2013-14 Ministerial Statement on Australia's International Development Assistance Program

In international terms, Australian foreign aid spending isn't especially impressive. In 2011, the last year for which comparative data is available, Australia ranked 12th out of 22 OECD countries for aid as a share of GNI (see Figure 9.3). Not only do we fall below the average for industrialised nations, but our last reported GNI figure of 0.37% is barely more than half of the agreed United Nations target of 0.7%, now met by five OECD-DAC countries, including the UK, plus the UAE. (According to ANU's Development Policy Centre, new data suggests Australia—the OECD's 8th largest and the world's 12th largest economy—fell to 10th place in overall spending and 13th place as a percentage of GNI in 2013. It's set to fall further as our spending drops but global aid expenditure rebounds with OECD countries recovering from the Global Financial Crisis and 'non-traditional donors' that operate outside OECD guidelines, such as China, increasing their development spending.)

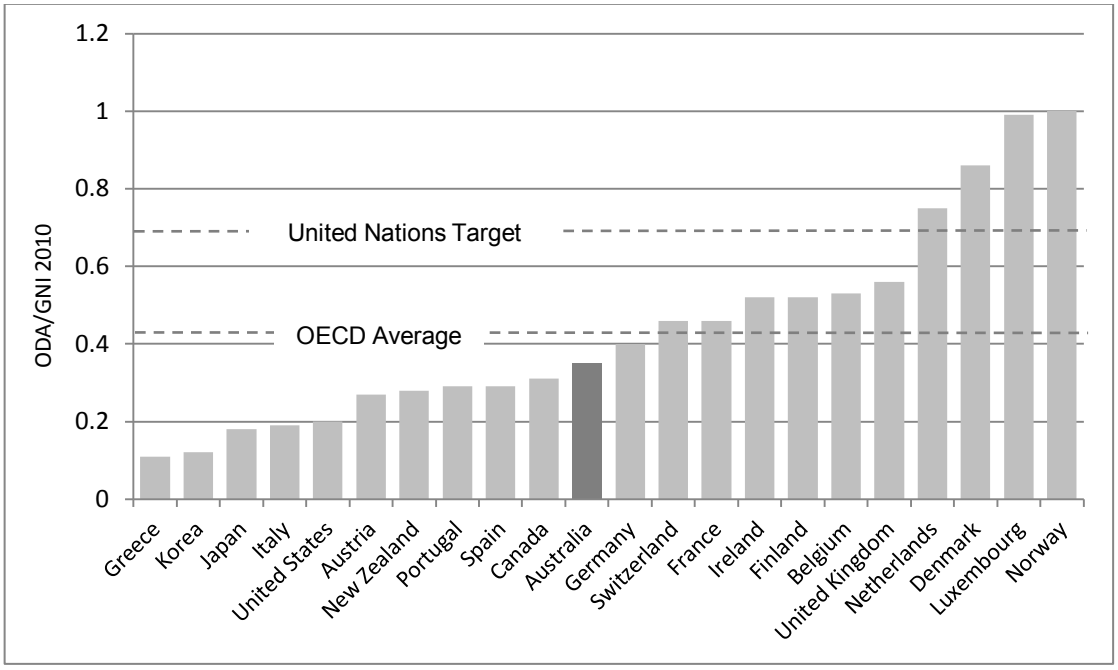
A bipartisan consensus from the late Howard era to the first Rudd government to increase Australia's foreign aid to 0.5% of GNI by 2015-16 was faltering by 2012 as the then government grappled for an elusive surplus—abruptly reallocating hundreds of millions of dollars within the aid budget to meet domestic asylum-seeker costs, and deferring the timetable to meet the 0.5% target out to 2017-18. In 2013-14 ODA was only budgeted to be 0.37% of GNI.

The Coalition's pre-election foreign affairs policy recommitted to the 0.5% target as a benchmark but announced it would 'stabilise the aid budget' by reducing previously planned growth to just rises in the consumer price index over the forward estimates, so that only nominal increases in funding could be expected in the immediate term. Before the election, the Coalition signalled it intended to make significant cuts to the aid budget for each of the next several years, and in January 2014 the new Government cut $650 million spending for the remainder of 2013-14.

The current budget caps aid spending at $5.03 billion over the next two financial years, after which it will grow in line with the CPI. This is actually $1 billion more than promised by the Coalition at the time of the 2013 election.

Although ODA remains almost unchanged in nominal terms from the revised 2013-14 figure, January's $650 million cut and anticipated inflation in 2015-16 and 2016-17 constitutes a decrease of nearly 10% in real terms over three years from the baseline of May 2013. But while the 10% real fall is about equal to the aid cuts early in the Howard government, it occurs off a base that has more than doubled in real terms. Moreover, its effects should be partly offset by three major sources of savings (totalling nearly $600 million) identified by the Development Policy Centre at the Australian National University in the budget figures and statements. These are: the return for development purposes of $375 million previously allocated to support asylum seekers in Australia; a reduction of $100 million previously spent in Africa and Latin America (partly associated with our UN Security Council campaign); and a reduction in administrative expenses with the end of the duplication of back-office functions performed by DFAT and the decreased staff requirement due to the evaporation of previously planned growth in the program.

Figure 9.3: Comparison of ODA from OECD nations



Source: 2013 OECD Factbook

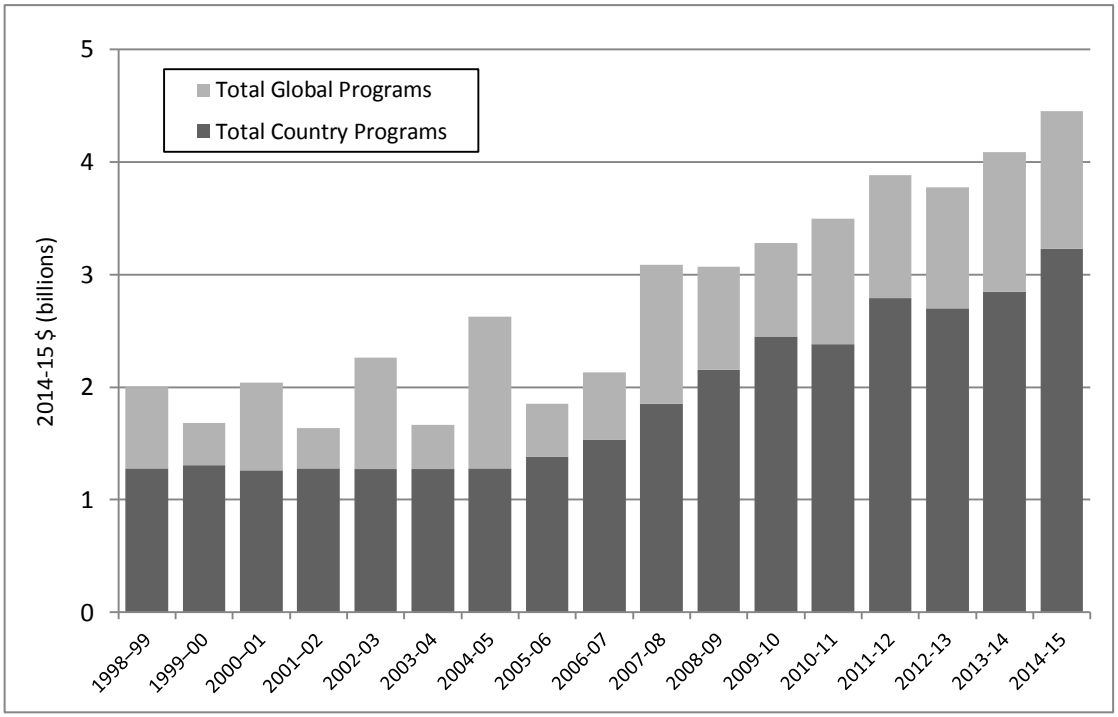
Where does the money go?

The annual aid budget as administered by AusAID is composed of a country-specific program and a global program, see Figure 9.4. The latter includes payments to various development banks and UN and Commonwealth agencies, including emergency aid through the World Food Program. Because of multi-year payments, the global program can vary greatly from one year to the next (accrual accounting smooths the payments in reporting).

Australian country-specific aid is mostly focused on Asia and Pacific Island states, although locations further afield also benefit. Figure 9.5 shows the amount of country-specific aid by region since 1998. As noted, PNG and regional programs stand out as particular beneficiaries of this year's budget.

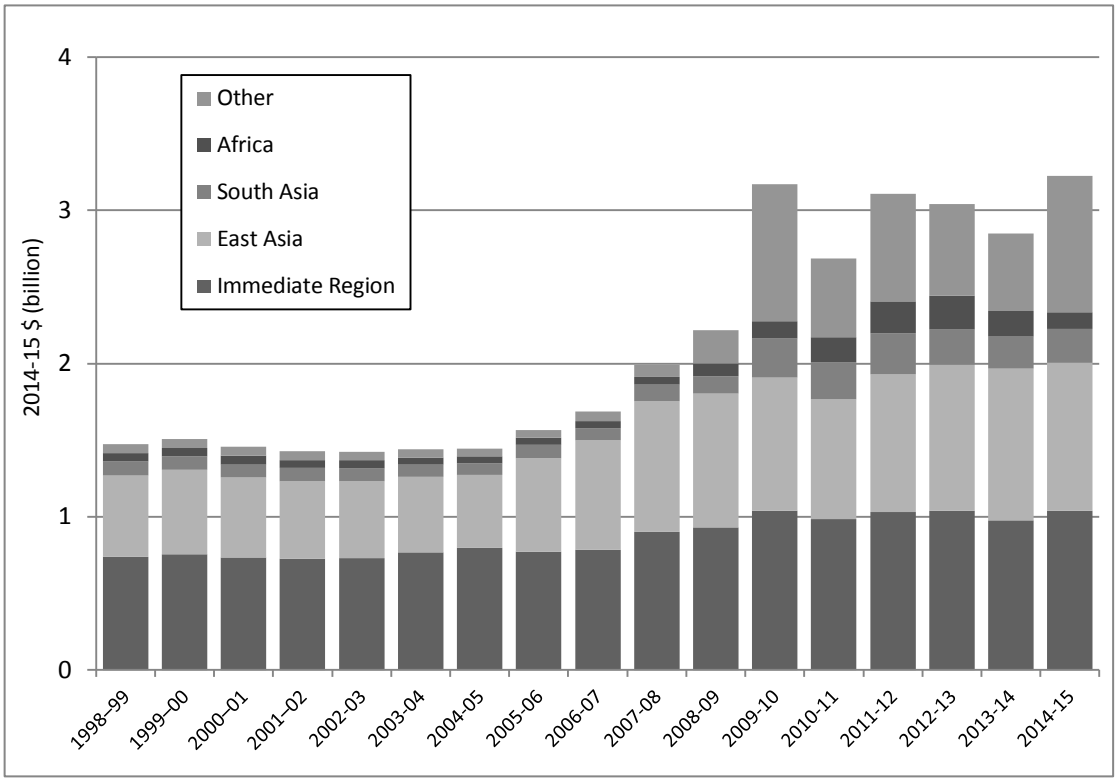
Traditionally, Australian aid tended to be overwhelmingly focused on countries close to Australia. This priority is still apparent in Figure 9.6 where the category of 'immediate region' includes PNG, East Timor and the island states of the Pacific. Though not shown, most of the aid to East Asia goes to Southeast Asia and to Indonesia in particular.

Figure 9.4: AusAID — Global and Country Programs



Source: AusAID annual reports and 2014-15 DFAT PBS – excludes spending by other departments and departmental spending

Figure 9.5: AusAID country programs— spending by region 1998-2014



Source: AusAID annual reports and 2014-15 DFAT PBS

Table 9.4 lists Australia's total ODA by value for 2013-14 and 2014-15 (including apportionment from global programs where possible and including non-AusAID programs).

An additional roughly $2 billion is provided through core contributions to multilateral organisations. This country-specific data provides an interesting picture of Australia's changing aid priorities. It underlines the fall in funding for Africa and the Middle East.

Table 9.4: Australian aid — spending by partner country/region 2014-15

	2013-14 Estimated Outcome ($m)	2014-15 Budget Estimate ($m)		2013-14 Estimated Outcome ($m)	2014-15 Budget Estimate ($m)
Indonesia	601.6	605.3	Sri Lanka	40.8	42.8
Papua New Guinea	519.4	577.1	Samoa	36.4	37.6
Sub-Saharan Africa	243.8	186.9	Nepal	35.3	33.9
Solomon Islands	164.4	168.1	South /West Asia Regional	27.7	33.1
Philippines	175.2	143	Tonga	29.3	30.3
Vietnam	138.9	141.3	Nauru	29.5	27.1
Afghanistan	149.3	134.2	Kiribati	26.3	26.9
Pacific Regional	105.4	129.1	Mongolia	16.7	16.3
East Asia Regional	81.4	100	Latin America	19	16.1
Timor-Leste	112.3	96.6	Bhutan	13.9	14.8
Bangladesh	84.4	94.2	North Pacific	12.9	13.5
Burma	81.4	90	Tuvalu	10.1	10.4
Cambodia	77.5	79	Middle East / North Africa	42.2	8.8
Pakistan	78.3	79	Maldives	6.4	7
Fiji	59.5	61.9	Niue and Tokelau	5.5	6.3
Vanuatu	60.1	60.4	Caribbean	10.6	5
Palestinian Territories	54.8	56.5	Cook Islands	3.7	4
Laos	56.4	55.6	Iraq	4.1	0.3

Source: DFAT website

How does aid further Australia's national interests?

Aside from making us feel better about ourselves, foreign aid furthers our national interests in two ways. First, bilateral aid to countries establishes a *quid pro quo* that facilitates access to, and influence with, foreign governments. Second, aid can bolster the institutions, infrastructure and human capital necessary for economic development and political stability. The rationale for the first category is self-evident; the second furthers our national interest by improving the stability of countries important to our security.

Much of Australian aid is of the first sort. Until recently, for example, we gave a small amount of aid to China each year, which had no significant impact on its 1.3 billion people or its economic development. Other aid, like that to Solomon Islands, is directly focused on achieving tangible improvements in governance, human security and economic development. Beyond seeking to address severe deprivation and inequality as potential sparks for violence and instability in nearby countries, aid's direct security dimensions include: stabilising fragile states (whether in regional interventions such as RAMSI, or by supporting ODA-eligible police and other preventive security partnerships before challenges reach crisis-point); assisting security sector reform to help demobilise, disarm and reintegrate ex-combatant groups and prevent violence re-emerging once stabilisation

missions wind-down; and civil-military cooperation to provide planning, logistics, transport, communications, and medical equipment and skills following disasters and emergencies.

Significantly, DFAT Secretary Peter Varghese has stated that there's no talk of a return to using the aid program to directly assist Australian firms and exports, which existed as AusAID's third, commercial, aim—alongside humanitarian and strategic goals–until 1997.

An informative picture emerges by examining the ratio of Australian aid to a recipient country's GDP. High ratios indicate a real effort to make a difference in a country; small ratios reflect largely diplomatic gestures that will hopefully be repaid through access and influence. Table 9.5 lists Australian aid recipients in ascending order of the ratio of Australian aid to national GDP. The figures for smaller nations are unreliable. Not surprisingly, Pacific Island states head the list followed by other countries in the immediate region. Note that some smaller Pacific countries have been omitted because economic data wasn't available. For comparison, the latest GDP per capita in PPP dollars has been included as a measure of the relative level of poverty in recipient countries. Clearly, Australian aid is only loosely directed on the basis of need.

Table 9.5: Australian aid as a share of GDP

Country	Ratio of Australian aid to GDP (PPP)	2014-15 Australian Aid (A$m)	2014 per capita (PPP)	Country	Ratio of Australian aid to GDP (PPP)	2014-15 Australian Aid (A$m)	2014 per capita (PPP)
Tuvalu	27.28%	10.4	3,617	Maldives	0.23%	7	9,543
Solomon Islands	8.81%	168.1	3,568	Cambodia	0.20%	79	2,777
Vanuatu	4.92%	60.4	4,847	Mongolia	0.09%	16.3	6,631
Kiribati	3.97%	26.9	6,533	Nepal	0.08%	33.9	1,576
Tonga	3.73%	30.3	8,406	Burma	0.08%	90	1,867
Samoa	3.43%	37.6	6,384	Indonesia	0.05%	605.3	5,499
PNG	2.91%	577.1	2,977	Vietnam	0.04%	141.3	4,256
Fiji	1.44%	61.9	5,254	Philippines	0.03%	143	4,962
Afghanistan	0.39%	134.2	1,178	Sri Lanka	0.03%	42.8	7,046
Timor-Leste	0.36%	96.6	23,338	Bangladesh	0.03%	94.2	2,216
Bhutan	0.31%	14.8	6,864	Pakistan	0.01%	79	3,231
Laos	0.26%	55.6	3,285	Iraq	0.00%	0.3	7,703

Sources: DFAT website, IMF World Economic Outlook April 2014.

The ratio of aid to GDP at which aid becomes an entirely diplomatic gesture is impossible to define, though it's hard to argue that figures below 0.5% of GDP reflect a serious effort to have a significant impact—except perhaps in a limited area like governance.

Conversely, it's clear Australia is trying to make a real difference in those countries where aid approaches or exceeds 5% of GDP. As Table 9.5 shows, this category is entirely within our immediate region. (Satish Chand shows that, statistically, the crucial determinant of who receives our aid and why appears to be physical proximity to Canberra. In that study, poverty levels only appear significant after recipients have been chosen, and funding shows a strong *inverse* correlation to the good governance likely to promote aid effectiveness.)

Australia's military cooperation program

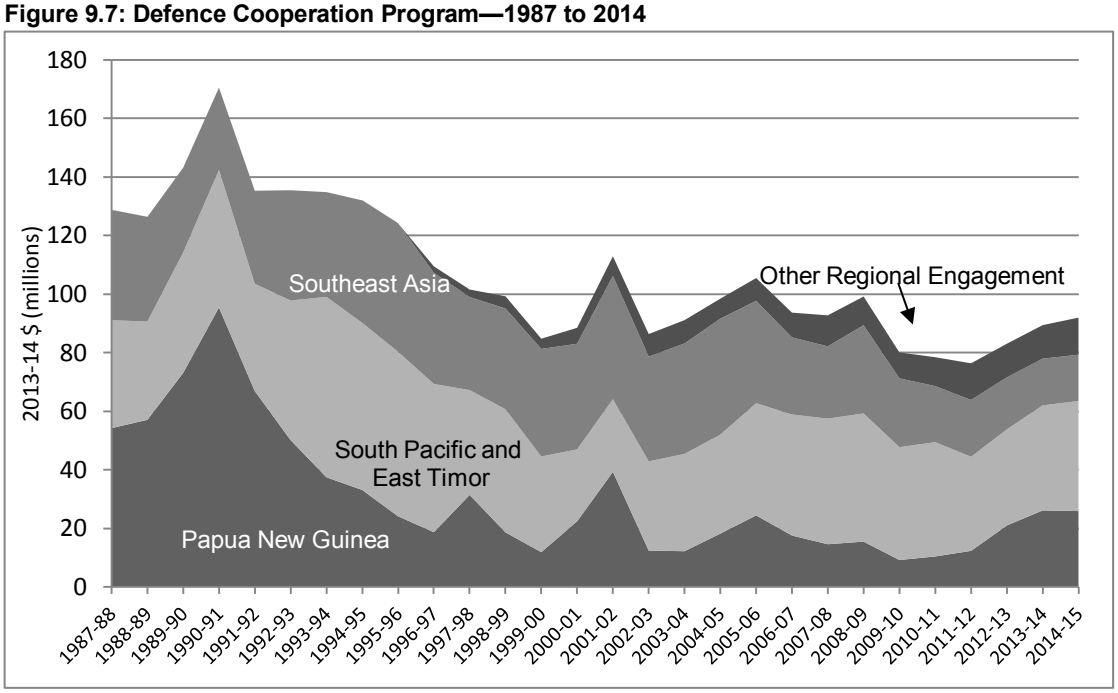
Allied to Australia's international aid effort is the $92 million a year Defence Cooperation Program run and funded by the Department of Defence. According to the 2014-15 Portfolio Budget Statement, the Defence Cooperation Program supports Australia's network of bilateral and multilateral relationships by engaging selected international partners, with a focus on practical engagement to help build capacity and professionalism, foster transparency and mutual understanding, and improve the ability of regional defence and security forces to work with Australia and each other. The aims and objectives are to:

- support regional security
- work with regional partners and others to shape a stable regional environment
- consolidate Australia's position as a key partner on regional security issues
- encourage and assist the development of defence self-reliance within regional countries.

In practice, the Defence Cooperation Program provides assistance to regional security forces through military advisors, training initiatives, bilateral exercises, capacity building, and equipment and infrastructure projects. A long-standing part of the Defence Cooperation Program is the Pacific Patrol Boat (PPB) Program, which provided 22 Patrol Boats along with ongoing training and technical support to 12 Pacific Island countries. These vessels allow the countries involved in the Program to independently police their maritime territories. Funding to support the follow-on Pacific Maritime Security Program, due to start replacing the first PPBs from 2018, isn't specifically identified in the forward estimates, but is likely to be included in the Defence Capability Plan that will accompany the 2015 Defence White Paper.

Figure 9.7 sets out the spending on the Defence Cooperation Program over the past 20-odd years. For ease of display, individual country spending has been aggregated into convenient categories. Country specific data for 2013-14 and 2014-15 appears in Table 9.6.

Figure 9.7: Defence Cooperation Program—1987 to 2014



Source: Defence Budget Papers and Annual Reports

Table 9.6: Defence Cooperation Program—2013-14 and 2014-15

Country	2013-14 ($'000)	2014-15 ($'000)	Country	2013-14 ($'000)	2014-15 ($'000)
South Pacific			**Southeast Asia**		
Timor-Leste	3,599	3,717	Singapore	111	72
Vanuatu	580	878	Philippines	3,214	2,743
Solomon Islands	756	851	Thailand	2,344	2,640
Tonga	3,793	4,863	Malaysia	3,234	3,176
Samoa	166	116	Indonesia	3,298	3,796
Cook Islands	33	98	Vietnam	2,218	1,977
Fiji			Cambodia and Laos	1,095	1,240
Marshall Islands	169	171	Brunei	6	11
Micronesia	229	112	Myanmar	28	167
Tuvalu	132	237	***Sub-total***	**15,548**	**15,822**
Kiribati	152	166	Other regional activities	**6,006**	**6,807**
Palau	299	376	Defence International Training Centre	5,151	5,855
Program Housing	4,114	4,263	**Total**	**87,211**	**91,954**
Pacific Patrol Boats	20,976	21,705			
Sub-total	**34,998**	**37,553**			
Papua New Guinea	25,508	25,917			

Source: 2014-15 PBS

Further reading

Satish Chand, *Who receives Australian aid and why?*, Discussion Paper 6, Crawford School of Government, ANU, June 2011.

Sam Bateman. Anthony Bergin and Haley Channer, *Terms of engagement: Australia's regional defence diplomacy*, ASPI, July 2013.

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Glossary

ADF	Australian Defence Force
AES	Additional Estimates Statements
AEW&C	Airborne Early Warning & Control
ANAO	Australian National Audit Office
APS	Australian Public Service
CDF	Chief of the Defence Force
CIOG	Chief Information Officer Group
CSP	Commercial Support Program
CUC	Capital Use Charge
DAR	Defence Annual Report
DCP	Defence Capability Plan
DFRB	Defence Force Retirement and Death Benefits
DHA	Defence Housing Authority
DMO	Defence Materiel Organisation
DRP	Defence Reform Program
DSG	Defence Support Group
DSTO	Defence Science and Technology Organisation
EWSP	Electronic Warfare Self Protection
FADT	Foreign Affairs Defence and Trade
FBT	Fringe Benefits Tax
FMA	*Financial Management and Accountability Act 1997*
GDP	Gross Domestic Product
GNI	Gross National Income
GST	Goods and services tax
NPOC	Net Personnel and Operating Costs
OPA	Official Public Account
PAES	Portfolio Additional Estimates Statements
PBS	Portfolio Budget Statement
SES	Senior Executive Service

The Cost of Defence

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